An Introductory Lecture
ON
THE FOUNDATIONS OF MEDICAL SCIENCE.

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GENTLEMEN, — The extraordinary advance which has characterised nearly every department of science during the past fifty years can hardly be said to have helped the solution of that most important of all problems, the very foundation of natural science—the nature of life. To us engaged in the study of disease and the relief of suffering it is—and from more than one point of view—a fundamental question, one which from the earliest times has been regarded by the medical profession with the keenest interest. Time after time scientific enthusiasts have announced in the most confident terms, and for more than forty years the public have been assured again and again, that at last the mystery had been solved or was so near solution that it might be considered as practically settled. Among scientific workers and thinkers, however, the divergence of opinion as to the real nature of life has been, and is, so great that we are still uncertain how any living thing is formed, how it grows, what is the exact nature of many diseases, and in what manner the action of many of our medicines is to be correctly explained; while, notwithstanding great progress in investigation, many morbid changes and phenomena connected with the healing of wounds and the repair of injuries have yet to be cleared up before we shall be able to say that the nature of vital processes is understood. The very foundations—the first principles of all living nature, the exact differences between the living and the non-living state—have still to be established. Even the broad differences between a particle of matter which is actually living and one that has just ceased to live have not been ascertained, and our physiology, pathology, and medical science rest upon no certain basis. Mental operations have received various explanations, but not one that has been offered adequately accounts for the facts, while vague and uncertain data and conflicting interpretations of facts form the foundations upon which uncertain and perpetually changing philosophy has been constructed. So strong, however, is the conviction of some with regard to the truth of the physical doctrine of life and the generalisation that the living and non-living are one, that not a few would modify our systems of government and education in order to bring them into accordance with certain fanciful speculations upon the religion, morality, and civilisation of the future when physical doctrines shall be universally accepted and taught.

So determined has been and is the set of opinion against the idea of the operation in living beings of anything in its nature distinct from physical or chemical change that I have long hesitated to press a contrary view, notwithstanding that facts and arguments in all departments of living nature give to it very strong support; while, on the other hand, the favourite doctrines still taught are contrary to all living nature, and to make them popular it has been necessary to invent a new nature—a nature which from the first has been shown to be impossible. Lately, however, a change has come over men's views. Not a few have begun to doubt whether the purely physical doctrine of life is supported by facts, and at last the distinguished President of the Chemical Section at the Ipswich meeting of the British Association has dared, not only to express his doubts concerning the purely physical doctrine of life, but has gone so far as to plead "for a little more vitality." I heartily join in his plea, and have for many years hoped that ere long we should be permitted to admit the operation of a vital, constructing, arranging, guiding, and regulating power working in everything that has life. I have endeavoured to show exactly where this power operates and upon what, and have drawn attention to the fact that the living matter or "bioplasm" possesses very similar powers in all living things, from the lowest to the highest. For the most part the plea has been in vain, and overwhelming authority has declared for the opposite view, and that those who differ, being weakest, are to go to the wall.

This question of the nature of life forces itself upon our consideration in all our deeper medical and physiological inquiries and in all attempts to decide upon the foundations of natural knowledge. Not only are intellect, thought, and the countless workings of the mind inexplicable upon physical doctrines, but the movements and growth of the very simplest living forms are due to far more than is comprised in purely physical and chemical changes. Is not life-power the real, directing, controlling, regulating, and selecting agency in every form of the living? How can we accept the proposition that from non-living atoms and their properties is somehow evolved a power which determines the arrangement of these very atoms, which places them in already determined positions, that tears them away from one another and then brings them within the sphere of their influence so that new and totally different substances result? Could watches and engines make themselves, and multiply, regulate, and direct, set themselves in motion, and stop when they willed to do so, some comparison might be made between machines and living matter. I feel sure that all intelligent persons will agree with me in thinking that the time has arrived when this matter should be thoroughly reconsidered. The influence of vitality upon matter as a guiding and directing agency—as a power by which the elements of matter may be torn away from one another, rearranged, and caused to recombine in a way unknown to physics and chemistry—has yet to be recognised, and, if possible, investigated. That this power is transmitted from living particles to lifeless ones, which then live, is certain; equally certain is it that all living matter is clear, transparent, structureless, and as colourless as pure water. These are the characters of the simple substance in which vital changes are effected without machinery and without any apparatus. This living matter or bioplasm is, I believe, the foundation of all living nature, the seat of all vital phenomena in health and disease, and the only substance in nature possessing powers correctly termed vital. Is there not evidence that in every kind of living matter the elements of the substance that lives may be separated and rearranged in an order determined beforehand, and in such a manner that definite compounds result, and structures evidently designed for definite purposes are formed to do certain work? Have any such phenomena been explained by physics and chemistry? Consider whether any machine has been constructed that can perform work and be kept for any length of time in working order without the designing, regulating, managing power of the living mind. Where is the laboratory that performs chemical operations without the chemist? And where is the matter that can be subjected to analytical and synthetical operations without the intervention of some living agency? And yet it has been affirmed again and again that the living cell is a lifeless laboratory, where work of the most complex kind is carried out without any designing, directing, or controlling agency whatever. It is often assumed that substances of chemical simplicity are more easily changed in vital action than bodies of great complexity of composition; but as far as we have evidence complexity and simplicity of composition are equally overcome by living power. The change seems to be carried out in all cases in the most perfect manner, and very quickly. The view of the building up from simple to complex is not justified. The atoms seem to take up their appointed positions and relations as if impelled by irresistible power, and according to the same principles in every case, from the lowest to the highest organisms.

The members of the profession and all students are to be congratulated upon the addition, during the past three years, of a new subject to those which have long formed the basis of medical education. The careful study of elementary biology must now be taken up by every medical student in the early part of his course. He has to work with the microscope and to become familiar with the use of instruments for delicate research which were not known to the advanced investigators of fifty years ago. Every student acquires real knowledge of the minute structure of the body, and may form his own conception of the general nature of the wonderful changes characteristic of living things, from the lowest organisms to man himself. I hope you have all

seen what happens when a particle of living matter, say, of an amœba, exhibits what we call vital movements, and have observed portions moving away from the general mass. Such portions, becoming detached, begin a new and independent life, taking up nutriment on their own account, and growing like the parent organism from which they have been detached, or have detached themselves, and at length increase and multiply and at last die, like all other things that live. Some have affirmed that this living matter is "like" a mixture of oil and mucilage, but those who have studied practical elementary biology will not be misled by such a "likeness." Would that people generally could also study some of these simple living organisms and learn the differences between that which lives and assimilates, and grows and dies, and that which does not live. No one who had thought over what he had seen would be persuaded to assent to the proposition that the clear structureless living matter should be regarded as a form of machine, molecular or otherwise. When you examined this living matter under a high power I am sure you must have felt astonished that any one could speak of such a thing as a mechanism or as a laboratory. The moving projections or diverticula just alluded to, like those of leucocytes and pus and mucus corpuscles, are well deserving of your further attentive study. Watch carefully the movements and notice how very clear and transparent is the moving matter. In some you cannot discern a single granule even with the aid of the highest powers, and I think when you do see granules and carefully study their movements you will agree with me in the conclusion that it is not in these visible granules that the moving power resides, but that the visible particles are moved by the clear, soft, structureless substance of which the diverticula consist. The process of growth may continue by the taking up of non-living matter by the transparent, moving, living substance and the communication to it of amœba life, through generations. The process has proceeded possibly for thousands (?) of years, but whether an atom of the matter of the parental organism remains, except for a very short time as a constituent part of the detached descendant, seems to rest upon too fanciful a basis to entitle the living changing matter to be regarded as *immortal*. Think over what you have seen and consider how the wonderful movements are occasioned, how the living matter communicates its powers to the non-living and grows and multiplies. Can it be merely chemical change or mechanical action that produces the result? When and what is the machinery said to be present, and how is any "molecular mechanism" to be demonstrated in such transparent substance? *Authority* alone steps forward and insists upon laws and properties and tendencies, declares to us what we are to believe, and prophecies what our successors will discern in the future.

Before the year 1860, after having carried on observations upon the tissues of plants and animals in many departments of living nature, and from the earliest period of development to the fully formed state and into old age, under the highest magnifying powers (from 700 to more than 2000 diameters) and with great advantages as regards the preparation of specimens, I was led to draw a distinction in each tissue, organ, or organism between the living growing formative matter and that which had been formed and could not reproduce itself or give rise to more formed matter. I was gradually led to the general conclusion that every form of the living growing matter was absolutely distinct from every kind of the resulting formed matter produced by it, and, further, that the influence upon the non-living pabulum was peculiar and belonged to all living matter, but to this only, and that it was not comparable with, or allied to, any other known property, power, or action of matter. These conclusions were illustrated in detail and were published in 1861. The preparations were shown to my class of physiology in this College and during lectures at the Royal College of Physicians of London, and further discussed in memoirs published in the Transactions of the Royal Microscopical Society, and in several works published at that time and since. It seemed to me that there were no indications whatever of the faintest analogy between the two kingdoms of nature—the living and the non-living,—no indications of any gradation from matter in the non-living state to that of life, while all living matter, from the very lowest to the very highest, exhibited certain common characters, being always colourless, structureless, capable of independent movement as a whole or in part, capable of growth, with a power of selecting certain substances and rejecting others, having structural formative power and powers of effecting chemical change, rendering it certain that the origin of matter so endowed was not direct from the non-living, and that this doctrine sooner or later would have to be abandoned. The warmest advocates of the latter view have never given adequate reasons for the faith they professed, or answered the many objections advanced against the conclusions they accepted and taught. All the particles of living matter actively concerned in the formation of tissues and organs, easily seen under a power of 200 diameters, are less, and most of them considerably less, than the $\frac{1}{1\,0\,5\,0}$th part of an inch in diameter. In the absence of such living particles nothing can be formed or secreted. If we are to form any accurate conception of the actual phenomena which occur when some of the matter of these minute living particles is resolved into tissue or secretion, it is necessary to study the matter very attentively with the aid of the highest powers, and then we can expect only to learn some of the broader changes which occur. The actual conversion probably occurs in particles of matter far more minute than can be discerned with the highest powers at our disposal. Most important facts, however, have been demonstrated with reference to the movements of many of these bioplasts. Where fibrous or other tissues are formed which are to be laid down in parallel lines the fibre is as it were spun off as the particle of living matter (bioplast) moves upwards or downwards along the tissue already formed, and thus fibre after fibre is added to those already existing. In some tissues the bioplast moves round and round the cell cavity, thus forming concentric fibres or layers. Such bioplasts, evenly distributed through all the tissues and organs of the body, even in the solid bone, take part in the formation of the tissue around, may exist through life, and change very slowly in health, most of them getting smaller as age advances. These are instrumental in establishing the passage of fluid to and fro in the interstices of the tissue. By this continual flow the integrity of the tissue is preserved, and the occurrence of degenerations prevented or postponed. Anything favouring the passage of more nutrient fluid than the very small quantity required by these slowly living particles favours their enlargement—they live too fast. They increase in size, and this change is constant in every form of inflammation and fever. With the enlargement there is invariably rise in temperature of the surrounding part and of the blood as it traverses the nearest capillaries. When this change, as in fever, affects the bioplasts of many tissues of the body and is widely distributed the temperature of the whole volume of blood is, as we know, raised several degrees, but falls with the diminution of the febrile symptoms, as the bioplasts return to their ordinary condition. If in ordinary inflammation the process continues and increases, the bioplasts give off diverticula which may be detached, and at last "pus corpuscles" result, and the adjacent structures are destroyed. In all pathological changes these bioplasts take part. The health of the body depends upon the normal state of the bioplasts, and movement and changes continue while life lasts. Their life is destroyed by many poisons, notably by hydrocyanic acid, the proportion of 1 in 100,000 in the blood being probably sufficient to destroy the life of adjacent bioplasts in a few seconds. You must have seen multitudes of these bioplasts disseminated through the tissues which you have examined, and have, no doubt, studied their arrangement in different tissues and organs, though, perhaps, from their being perfectly colourless you may not have regarded them as the most necessary part of the organism. Without them no tissue or organ could have been formed, could have preserved its integrity, or, in case of injury, could have been repaired. They are the life of the body, and without them nothing can live; they constitute the living part of the body—that is, the matter that dies. In cases of fever and inflammation, and in various conditions in which there is increased flow and facilitated access to the bioplasm of nutrient matter in any tissue or organ, one sees, after the altered state has lasted for a short time, arising here and there in various parts of the bioplasm minute dots, which gradually become large enough to be seen easily, and are known as nuclei. If the process continues some of them become much larger, and in them new points appear (nucleoli). This is an example of true evolution, as the bodies in question are new centres of living matter, which arise in already existing and perfectly structureless bioplasm.

Not only as long as life lasts is the substance of which living matter is composed in constant movement and portions caused to change in position, but the very elements of the matter, however strongly they may have been united in the

non-living condition, are caused to separate, and not only are they rearranged, but they are rearranged in a definite and predetermined manner which differs in different organisms and in different tissues and organs of the same organism. Such movements, of course, can only be represented to the mind, since the movement spoken of and the affected particles themselves are far beyond the present range of our vision, assisted as it may be to the utmost with the aid of very high magnifying powers. The movements we are considering in very minute particles of living matter take a general direction from centre to circumference, and the places of those which have taken a centrifugal course are taken up by the pabulum, the flow of which is centripetal. It is, in fact, in these centres, far removed from our powers of vision, that life power seems to be communicated to the matter, and here the non-living matter begins to live. Life causes elements, however strongly combined, to separate, and overcomes the physical and chemical attractions of elements in combination. Life is able to raise particles above one another in a manner not explained. Of the rearrangement of the component atoms of matter, and of the alteration of their relation to one another during the living state, there can be no doubt, but how this is effected has not yet been ascertained. This rearrangement is different in the different kinds of living matter, and results in the production of certain special substances, constant as regards living matter of the same kind under the accustomed natural conditions. So far, observation and experiment have proved that this wonderful power has been directly derived from pre-existing living matter and may be transmitted to succeeding particles of matter without loss, but in certain instances with some modification, temporary or permanent.

It seems to me that as soon as you realise the appearance and movements of this living matter and the broad facts connected with it, its powers of selection, of growth, of chemical analysis, of direction, and rearrangement of elements, you will naturally require the strongest evidence before you accept from authority, however distinguished, the purely mechanical or chemical view. In the physical and chemical world there is nothing to approach it or that will in any way compare with living power. Every chemist must, indeed, long to discover the secret of the wonderful analytical and synthetical operations of living matter working without apparatus or chemicals, silently, perfectly, and continuously, in darkness as well as in light, in what we call cold as well as in heat, in winter as well as in summer. Is it not wrong in the face of what we know and have known for many years on the part of any authority to persist in the effort to make people believe that there is no mystery whatever, nothing to be discovered as regards these wonderful operations of nature which proceed in all living—that they belong to the physical category, and that, in fact, we are on the eve of the complete solution of the vital problem and of the demonsrration of the manner in which life works? In truth, we are farther off than ever from this discovery, because we are daily becoming better acquainted with the increasing number of facts as well as the difficulty of investigating them, which separate the knowledge we long for from the knowledge we possess. Is it right, in the face of such utterly inexplicable endowments of living matter, to suggest that they can be in any way dependent upon or derived from the properties of the matter, which for the time is the seat of operation of the endowment, or even to hint that our present scientific knowledge justifies the belief that they will receive a purely physical explanation? In the whole range of knowledge can one fact be pointed out which is allied to, or comparable with, or can be properly placed in the category to which these vital characteristics belong? Is there one of the remarkable powers of living matter which has yet received anything approaching an adequate explanation? Is there anything in the non-living world in any way comparable with the ordinary changes which have taken place in every living particle that has ever existed?

If any apology is due from me for troubling you with all these details, I am sure you will pardon me for desiring that I should give a brief account of them in the college in which I have been brought up and in which much of the actual work upon which my views rest was done. But there is another reason why I particularly wish to call attention to this view of vital action at this time. With reference to the powers of living matter, there is nothing more interesting and important than its chemical influence. One is amazed at the wonderful changes effected in composition brought about while matter is in this living state, and the extraordinary rearrangements silently and invisibly effected in the position and relation of the atoms of the living substance. I am particularly gratified at being able to say that this matter is at last being seriously considered and is receiving the attention it has long deserved. A distinguished chemist has recently expressed himself in favour of "vitality" and pleads for "a little more vitality in the chemical functions of living organisms." This is the first time I have seen anything so encouraging from the chemical side, and I hope Professor Meldola's remarks will be widely read by all interested in physiology and medicine. In his opening address as President of the Chemical Section at the Ipswich meeting of the British Association, which was published in *Nature* of Sept. 12th, 1895, p. 483, you will find some very pertinent remarks on the chemistry of living things, well worthy of the attention and criticism of those who still advocate physical and chemical theories of life. Professor Meldola freely acknowledges "that we have not yet solved the enigma of life," and suggests that physiologists have been led "to undervalue the importance of their *prime agent*" and pleads for "more vitality." Professor Meldola, in fact, without committing himself to vital power, certainly goes much farther in this direction than any other distinguished chemist has hitherto ventured. He considers that there is a great difference between laboratory and natural processes, and speaks of "the mystery that still surrounds the chemistry of the living organism."

The tendency of these views is very different from that of any of the doctrines hitherto advocated by chemists, and I venture to commend this part of the learned Professor's address to the careful notice of all interested in the advance of physiology and medical science. The President of the Section of Chemistry further observes that "everything must pass through the vital mill." In other words, everything formed in every living organism must pass through the state of living matter or bioplasm before it can be converted into the particular predetermined chemical substance. The phrase "vital mill" is, however, objectionable, as no mill is alive, and nothing living has the machinery of a mill. In the vital substance the atoms are made to take their places for the formation of special compounds without friction, without machinery, without reagents, without apparatus. The principles upon which the changes are carried out are totally different from those which obtain under any other circumstances known. If vitality, for which I have been pleading for more than thirty years, be granted, we shall be much nearer the explanation of vital phenomena than is supposed. The observations of the President of the new Botanical Section, Professor Thiselton Dyer, Director of Kew, upon this subject are very satisfactory to me, for many years ago I also drew attention to the contrast between the way in which chemical changes were effected in living matter and in the laboratory. The President says: "The plant produces a profusion of substances apparently [why "apparently"?] with great facility which the chemist can only build up in the most circuitous way." I am delighted to find that at last this important question has a chance of being considered from this point of view, and that at last we may hope for a "little more vitality" to assist us in our consideration of the real nature of vital phenomena.

So far, then, we seem to have arrived at this—that the matter of the body actually living can be distinguished from the material which is formed by changes occurring in any portion in which vital phenomena have ceased. For instance, in a growing "cell" of epithelium the central part is structureless and is alive, and its particles can grow and multiply. The outer part has structure, but no longer manifests vital phenomena. It cannot produce matter like itself, or grow, or select nutriment, or exhibit spontaneous movements. Just at the point where the formed material and the living matter touch, particles of the latter from time to time cease to exhibit vital changes, and the resulting products become formed material which is added to that already produced. Such changes occur everywhere in living organisms, from the first to the last moment of existence, whether "high" or "low," "simple" or "complex." *Vital change* is one thing, physical and chemical change another, and no particle of matter is the seat of these two classes of changes at the same moment. But there are other wonderful powers associated with the living condition, known to all but understood by no one, some of which I shall now briefly refer to. With regard to the marvellous power which a speck of living matter may transmit without loss to descendants

during centuries, only think of this: the oldest variety of pigeon, bred for many generations without loss, and perhaps with improvement, of its remarkable characteristics—and bear in mind not only as regards colour, form, and number of feathers, but widely diverging from its original progenitors as to the size and characters of bones, muscles, nerves, and other tissues; as to habits, manner, and disposition, as to powers of flight—in fact, as to many particulars which would lead us to regard it as a true species far removed from the rock pigeon—in short, having little in common with that species—nevertheless carries, apparently fixed and unalterable in its organisation, not a new tendency, but an inalienable compulsion if left to nature for its offspring to revert to the ancestral characteristics; not immediately, but after a few generations its descendants exhibit the original specific characters, having lost all traces of the variety which but a few (often only three or four) generations before might have been regarded as a definite species of pigeon. And, further, think of this—that every rock pigeon, generation after generation, has possessed deeply ingrained, as it were, in its organisation the power of transmitting to descendants the capacity of giving origin to any or several varieties of pigeon that are known, and perhaps to many more varieties not dreamt of, and at the same time to every variety the power of reversion to the original species, if only each individual is allowed to choose its mate as in a natural state. Consider the constancy and, on the other hand, the wonderful plasticity of the organisation of this familiar but remarkable bird. Contemplate the wonderful power of change from, and the more wonderful power of reversion to, the original type transmitted through generation after generation and retained through centuries, the only medium being a speck of matter so minute that it would not be indicated by a very delicate balance, and tell me whether you think it probable that the powers referred to are due to the original material properties of the fragment of matter concerned or whether this acts only as a carrier of the marvellous power belonging to the living world only and originating in the infinite. Never before the present time was there any possibility of approaching the thorough investigation of the important question of life. Our much wider range of knowledge concerning the structure and action of many living organisms widely separated from one another has, in fact, enabled us to consider the question from many new points of view; and, although the issue between contending parties is perhaps more pronounced than ever, the probability of arriving at the truth has immeasurably increased, if, indeed, it has not already reached something approaching certainty. It is curious that, although knowledge of minute structure and of the actual phenomena characteristic of living matter has been widely spread, the important question of the nature of life and its resemblance to, and differences from, all physical and chemical actions known has only been very imperfectly debated. One would think that the inquiry lay far away from the paths familiar to most educated persons, but the most important points bearing upon the inquiry can now be made intelligible to educated minds without much difficulty, so that many thoughtful persons may be able to form a judgment of their own, at least concerning the direction in which the truth will probably be discovered.

Among the broad and well-known facts, then, not to be explained by the physical view of vital action is the vast subject of heredity so remarkable in every department of nature, both for the long periods of time of its continuous operation and for the magnitude and enormous importance of the results when considered in connexion with the very minute quantity of matter concerned. Is the transmission of characteristics of minute structural details of extraordinary constancy handed down from generation to generation for hundreds or thousands of years by the very minute particle of matter which we know to be concerned in the process to be attributed to the physical properties and chemical composition of the matter involved or to vital power communicated to this from the immediate predecessor? Of all vital attributes this is the most remarkable, and while some facts of living nature impress us with change and modification in descent, others astonish us with the extraordinary constancy of the transmitted characters. It is also certain that many of the most striking divergencies known to us are evanescent, and after a few generations ancestral characteristics reappear in all their intensity.

Our attention has been frequently and most forcibly directed to the fact of the likeness between very numerous distinct species of organisms, and especially in the case of man and higher vertebrata, during the latter portion of the developmental process, but little stress has been laid on the much more striking fact of the much closer resemblance during the early and earliest changes—the far more remarkable fact that at first, when the most striking phenomena of all life are actively proceeding, and the changes afterwards so prominent are commencing or being prepared for, no difference has yet been demonstrated between the particles of living matter instrumental in the production of living organisms eventually far removed from one another in all points. This fact has hardly been noticed, and yet who shall declare that there is really no difference or that there is anything approaching similarity or identity between the clear, transparent, structureless specks of living matter that represent the early stage of being, say, of mouse and elephant, of man and monkey, and as the changes proceed and growth goes on who will now dare to assert that they are to be accounted for by physics and chemistry only, or that there is no evidence of the constant activity and directing power of another factor—no less than the most tremendous power above all else in living nature—life?

We have passed through a very widespread effort to convince us that our present knowledge of the facts of nature justifies all who allow their minds to be influenced by reason in abandoning their belief, not only in Christianity, but in the existence of infinite power. Moreover, this effort is not the work of a fanatical party determined to conquer or to die, but rather of men of exceptional intelligence as well as of power of leading other minds. Some of them regretfully acknowledge the decision at which reason has compelled them to arrive; but, having been guided by facts and reason alone, they accept, though with reluctance, the only conclusions which in their view the understanding can now accept. It is this supposed claim upon predominant reason—this positive declaration said to be enforced by facts of observation and experiment—that has influenced many and has led people to conclude that the old views can no longer be sustained and that our present intellectual position is absolutely different from any that has preceded. It is, therefore, urged that the opposition to religion at this time rests upon facts and arguments which have never, and, indeed, could not by any possibility have been, advanced before. In short, it is maintained that in consequence of new scientific knowledge the data upon which the truth of the religious ideas of the past was supposed to rest have been shown to be erroneous. He who believes in scientific truth must, if he acts according to the dictates of reason, abandon his old faith. This idea that the more recent discoveries in science have rendered impossible the acceptance of the religious doctrines formerly generally believed has undoubtedly gained many converts. The notion that it has been proved beyond doubt that the living and non-living are governed by the same laws, and that very long ago the living came direct from the non-living—in short, that the living and the non-living are one—has been widely accepted. Even those in doubt have been much influenced by the constant repetition of the statement that ere long all the phenomena of life will certainly be shown to be due to physical and chemical action only, and the dictum of Strauss, supported by Haeckel, that faith with its miracle has perished, must satisfy all whose judgment is swayed by reason alone. This notion that science must ere long somehow take the place of religion, though seldom expressed, has unquestionably influenced the views of some intelligent persons on the question of religious education, and it is more than probable that much of the recent opposition to religious teaching, culminating in the arbitrary withdrawal of the Government grant of £1700 a year which had been awarded to our college for five years, and of such vital consequence to our struggling institution, is also due in some measure to the change in general opinion in the direction indicated. It is sad, indeed, that some who have long been proclaiming freedom should have taken part in an effort to damage the interests of a college which has gained very high distinction by the original research and teaching of a distinguished scientific staff over a period of sixty years.[1]

We have now followed the phenomena common and peculiar to all living to the seat of their activity in living matter. In centres far more central than our present means of investigation will permit us to penetrate living particles communicate, and without loss, their marvellous powers to

[1] The grant has been restored since this was written.

some of the recently selected molecules of the non-living pabulum. It would seem that now for a time the ordinary properties of matter are held in suspense or are overcome. Here occur analytical operations of the most stupendous kind, which are carried out very quickly and in the quietest manner, without apparatus or reagents, and without resort to a high temperature. The matter which is the seat of these phenomena is as clear as water, structureless, and composed of very few elements which, if the matter dies, easily take the form of an albuminous substance with fatty matter and salts. During the living state the atoms of the matter, if there be atoms, may be torn from one another and made to take up new and definite relations, so that by synthesis there arise new substances with new properties, perhaps exhibiting structure and capable of performing purposive action of the most striking and at present inexplicable kind—motion, heat, light, electricity, being manifest in certain cases among other phenomena, while there are present no arrangements, conditions, or apparatus such as would enable us to develop these independently of the living. Here, then, as it seems to me, will be found the foundation not only of the principles of physiological, pathological, and medical science, but of that of the whole living world as distinguished from the lifeless cosmos. Here we must look for the initiation of all the changes characteristic of the living state. Account must also be taken of these peculiarly vital phenomena in discussions concerning consciousness, thought, and will, and the life that has been, is, and is to be. And may we not even hope that by further and deeper study of the phenomena of living matter under the new advantages of demonstration which we enjoy, and which are constantly progressing, some further light may be thrown by the increased skill of investigators of vital phenomena even upon the nature and relationship of material atoms in that boundless world of the non-living which ever has been and must be regarded alike by learned and unlearned with wonder and admiration?

An Address
ON
SEPTIC AND AUTO-INTOXICATIONS AS CAUSES OF DISEASE.

Delivered before the Wrexham Medical Society on May 10th, 1895,

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GENTLEMEN,—During the last seven or eight years I have observed, and have drawn the attention of others to, a number of cases strikingly illustrative of the importance of the application of antiseptic methods in medical as distinguished from surgical diseases. These cases were all of them severe and for a time obscure; and the circumstance that similar ones that have recently come under my observation had baffled the researches of some most highly trained and skilful minds makes me hope that good may result from continuing to direct attention to the subject. I am the more encouraged in this hope from the fact that testimony has been sent to me from several different quarters of good having been done by the publication of the previous reports. When, therefore, the request was conveyed to me that I would address you I determined after a little consideration once more to revert to the subject. Reports of the earlier of the cases to which I have alluded were published in inaugural addresses which it was my duty to deliver as President of the Liverpool Medical Institution during the sessions 1888–9 and 1889–90, the titles of these addresses being "The Principle of Disinfection in Medicine" and "Illustrations of the Operations of Ferments in Disease." A further series of great interest, owing to the intensity, and in two instances to the long duration, of the disease, was published in an address given to the Birkenhead Medical Society on March 9th, 1894, and those now to be related will serve to continue that series and to illustrate further the principle of action on which their successful treatment was founded. That principle, briefly stated, is to thoroughly explore every accessible portion of mucous membrane or skin in all obscure febrile disorders, and, if any breach of surface is discovered, to heal it. Frequently the only proceeding necessary in order to bring about this healing process is completely to cleanse the ulcer or abrasion. If this can be effected by irrigation with water or salt and water nothing more need be done. Generally, however, it will be advisable to employ one or other of the more active disinfectants, and sometimes, as in the case to be brought before you presently, to remove a bit of necrosing bone or a fragment of slough which is keeping up irritation.

I wish particularly to draw attention to the fact, so well known to every one of us and which should convince us of the importance and soundness of this principle, that fever of a hectic type, leading ultimately to death from exhaustion, is every day being caused by the absorption into the system of our patients of toxines manufactured by crowds of bacilli tuberculosis, lodged on pulmonary ulcers. We know that these bacilli do not penetrate far into the tissues as they need oxygen for their development, and that if we could only get at their hiding-places we should be able soon to make short work of them and to put a stop to the febrile process. It is the inaccessibility of their places of concealment alone that enables them for the most part to defy us. But we know also that every now and then pulmonary ulcers which have served as nests for the breeding of these bacilli become healed, and that directly the healing has been completed the patients have begun to amend and have ultimately recovered. There can be no mistake whatever about such cases and about the sequence of events and its causes. The fact of the presence of crowds of bacilli in blood-stained expectoration may have been demonstrated microscopically; hectic fever and wasting may have existed for some time; the death sentence even may have been pronounced, and yet the patient may have recovered. But before he can have recovered the bacilli must have disappeared and the preliminary ulcer have healed. Such cases are, alas, but rare in any individual man's experience, but they are numerous enough in the history of modern medicine to make the fact secure. Yet it is singular that with such a fact before us we seem slow to believe that ulcers in other parts quite within the reach of a diligent searcher can serve as the lurking places of various kinds of microbes, where they may manufacture disease-producing poisons of a virulent kind for a long time together, until they are found out and dislodged, when the poison-making process is at once stopped and the patient gets well. The lesson I am most desirous of driving home, then, is that in every case of acute or chronic fever of an unusual character that may not be fairly judged to be caused by one of the recognised fever-producing diseases every accessible portion of the organism should be thoroughly explored, and if any ulcer is discovered that should be healed. I am persuaded that if this were done there would be fewer cases of what is called inexplicable temperatures, and I could not help wondering, and in the light of one of the cases which I shall now bring under your notice and of the comments made on it as well as of others which I have reported, whether all those cases alluded to in the discussion on that subject at the meeting of the British Medical Association of last year were, after all, quite so inexplicable as they were thought and stated to be. A fact to be particularly borne in mind is that the abraded surface need not be a large one. An ulcer of a very small superficial extent is quite large enough to serve as an open door for the introduction of sufficient toxic material to cause serious symptoms, and in all probability the toxines are the chemical products of active microbic life on the site of the ulcer. Nor need there be much pus formation. Here again the ideas derived from our observation of pulmonary disease of a tuberculous type probably constantly mislead us. The intensity of fever is so commonly proportioned to the amount of purulent expectoration in cases of phthisis that we are apt to think that the one cannot occur without the other. The fact is, however, that there can be much pus without fever and much fever without pus. Pus has but to slowly accumulate even to a large amount out of reach of atmospheric air and there may be no obvious rise of temperature, as is seen in what were formerly termed by surgeons "cold abscesses." I make this remark for a reason which will be apparent when I relate one of the most remarkable of these cases, to which I will now ask your attention. I ought, however, to preface

the narrative with one further remark. It relates to the frequency with which such ulcers occur in the nasal passages and in the associated neighbouring parts. This should excite no surprise, but is, indeed, just what we might have anticipated. The dark and sinuous passages caused by the turbinated bones in the middle and posterior nares form admirable lurking-places for bacilli, difficult of detection and still more difficult sometimes of irrigation, yet affording all the most favourable conditions, such as moisture, warmth, and free admission of air, for their development.

On the afternoon of May 3rd, 1894, I was requested to see a patient, a medical man, residing at Liverpool, in consultation with Dr. George Wilkinson, who had been attending him for some days. I found him very much depressed and anxious about his condition. He was complaining of severe headache, which was aggravated by light, of feverishness, and of feeling generally very ill. The temperature was 104·4° F. and the pulse quick. The history given was that he had been well up to April 28th, on which day he became unwell, had a chilly sensation and much nausea. On the following day he was said to have felt well until the evening, when headache, especially around the left orbit, distressed him. He awoke at 2 A.M. on May 1st, the pain being then very severe; he vomited, and was restless till the morning was somewhat advanced. He then felt better, but the temperature was found to be 101·8° and by the evening 102°. He passed the day fairly well and was said to be better on the morning of the 2nd, when the temperature had fallen to 99°. As the day wore on he again became worse. The headache returned with much throbbing, and the temperature rose to 103°. During the night he was restless, and in the morning the temperature was still 103°, and as he felt no better I saw him in the afternoon with Dr. Wilkinson. My attention was attracted to a moderate injection of the left eyeball, and on pressing over this and the bridge of the nose I gave pain. On examining the nostril itself as well as the pain and restlessness of the patient permitted I found it also red and injected, and ascertained that inspissated blood-stained mucus had been discharged from it. Five grains of calomel were prescribed, a simple febrifuge mixture which Dr. Wilkinson had ordered was continued, and at my urgent desire it was agreed that boric acid should be used as a snuff several times daily, and some time after such use of it a warm solution of boric acid should be injected into the nostril. If inspissated mucus plugs the nostril, within three or four minutes of using a snuff of boric acid a free secretion is established which loosens and detaches it so that irrigation of the denuded membrane by any antiseptic solution can then be carried out. About two hours after my first visit I received an urgent request to see the patient again, as it was thought he was worse. I again met Dr. Wilkinson in consultation. Except that the temperature was slightly higher, and there appeared to be a little delirium, the patient's condition was as before, and as the local antisepsis had not yet been carried out we made no alteration, but agreed to act on our previously formed intention of seeing him again at one o'clock on the day following. At 10.30 on the following morning, however, I received a telephonic message to the effect that he was so much better that it was felt to be unnecessary to trouble us to call. I subsequently learnt that after using the snuff and irrigation he had a fair night; that on the following morning the temperature was 99°; that he felt much better all day; and that there was some discharge from the nostril. On the following day the improvement was more marked, the morning temperature being normal. The local applications were steadily persevered with and in a few days the patient became well, there being during those days only a very slight evening rise of temperature. After the recovery I was informed that two years previously he had had a severe attack of nasal catarrh, and that he was subject to colds in the head. My own opinion, which was shared by Dr. Wilkinson and the patient, was that the prompt relief was a consequence of the application of antiseptics to the nasal mucous membrane, where toxines were being manufactured and through which they were being absorbed in quantity sufficient to produce the fever and its associated symptoms.

On July 3rd, 1894, I was consulted by another medical practitioner, who practised in a healthy seaside town, under conditions apparently thoroughly favourable. The town was a favourite health resort, and his house, a very good one, was situated in one of its best parts. He was very anxious about his health. Every day about half an hour after breakfast he expectorated with some difficulty a little mucus, after which he was attacked by rigors that recurred daily and almost with the regularity of ague, to which he compared them. He had continued his professional work, though with much discomfort, while his axillary temperature was often as high as 103° F. The persistence of the condition led him to fear tuberculosis. I examined him with great care. The heart, lungs, and other organs were healthy to physical signs, and, indeed, the only discoverable lesion was a catarrhal condition of the mucous membrane of the left nostril. Under the belief that this lesion might be the cause of his feverishness I urged him to use freely and frequently a snuff composed of equal parts of boric acid and subnitrate of bismuth, and to gargle and, if necessary, to irrigate the nostril well with a strong solution of liquor sodæ chlorinatæ. A few months later I had occasion to go to his town to visit a patient with him, when, in reply to my inquiry, he told me that the fever disappeared at once on the employment of the local disinfectants and had never returned.

On April 9th, 1894, I saw another of my professional brethren in consultation with Dr. Twyford of St. Helens. In June, 1893, or ten months previously, he had had what was thought at the time to be typhoid fever, from which he had never recovered. Dr. Twyford was, however, of opinion that the illness, whatever it was from which he suffered in June, 1893, was the same as that from which he was suffering when I saw him. It was characterised by a rise of temperature every evening for many successive days, each rise being preceded by slight shivering and occasionally by a severe rigor. There had been such a rigor about ten days previously. He had lost three stones in weight. There was, however, this great peculiarity, that he would have at times several consecutive days free from fever, during which he would pick up strength and begin to put on flesh. At the time of my seeing him, which was at 3.30 P.M., his temperature was 101·4° F.; his pulse was 100; and his respiration 23 while in bed, to which he was then confined. He had been kept awake all the previous night by general pains. There were no cramps. The chest was well developed, the lungs and heart on physical examination were found to be healthy, the rapid respiration and quick pulse being possibly explicable by his condition of feverishness. What could be the cause of this long illness? The only discoverable signs were two or three slightly enlarged and tender glands behind the right sterno-mastoid (which, however, had not excited attention till pressure revealed the fact of tenderness) and some slight post-nasal discomfort which caused occasional hawking. In the hope that a lesion in the posterior nares in lymphatic connexion with the tender glands might be the cause of the illness I suggested the use of boric acid as a snuff and the irrigation of the nostrils with a warm solution of the same substance, and also that the nasal cavities should be thoroughly explored. The exploration was made shortly afterwards by a gentleman well skilled in such examinations, but as it was done at the patient's own house, with the disadvantage of defective illumination, nothing was then discovered. Being thus far disappointed in my expectation that a lesion would be detected at the back of the nostrils in lymphatic connexion with the irritated glands I subsequently wrote recommending that at any rate the glands themselves should be treated, while the antiseptic irrigation of the nostrils was persevered with. My advice was that a weak solution of carbolic acid should be injected into the loose cervical cellular tissue all around these glands. I had had injections of carbolic acid made into enlarged glands without any ill result beyond the pain at the moment, and even this can always be prevented by the previous application of a little ice and salt to the surface or by producing local cold in some other way. As I was unable, however, to promise that relief would follow it was not unreasonable that this treatment was declined. On July 12th, 1894, I received a letter from Dr. Twyford, from which I will quote a few lines: "He has now been ill for more than thirteen months, during eight of which he has been so ill as not to be able even to see a patient. Under these circumstances I advised him to go to London and see Dr. ——. I enclose you a copy of his letter." Two of the most distinguished metropolitan physicians were consulted. The conclusions come to were that there was nothing to justify the term leukæmia, there being no increase in the number of the white corpuscles; that there was no anæmia, the blood containing at least 90 per cent. of both corpuscles and hæmoglobin; that there seemed nothing in the past with which the pyrexia and

general state could be associated; that the enlargement of the lymphatic glands was curious, but was less significant than it had been from its having lessened; and, finally, that it seemed either a case of one of the untypical forms of tuberculosis or of a chronic constitutional disease allied to lymphadenoma, of which there was at present no definite knowledge. The second gentleman concurred in the view expressed above, with the additional suggestion that the symptoms might be due to some toxic influence possibly left behind by drain poisoning, from which the patient feared that he had originally suffered. A sea voyage and prolonged rest were recommended, together with an alterative and tonic medicinal treatment. It was further concluded that any definitely unfavourable prognosis was unjustifiable, while at the same time the obscurity of the nature of the case precluded any very positive cheerfulness. I only became aware of these opinions some time after they were formed. This was about thirteen months after the commencement of the illness, and nearly three months after I had first seen the patient. The opinions were valuable as precluding any but a rare and obscure form of fever, but they did not seem to consider the possibility of such a cause as I had suggested and had tried by the application of local disinfectants to combat—viz., a lesion at or behind the posterior nares in lymphatic connexion with the enlarged cervical glands, and serving both as a manufactory of poisons and an open door through which they could be introduced into the system. Before long, however, a new fact was observed which gave additional significance to this suggestion and afforded hope, to me at any rate, of a speedy cure. The patient paid a visit to Aberdeen and submitted himself to the examination of Dr. MacKenzie Booth, who discovered and removed a small superficial lamina of necrosed bone beneath the mucous membrane of the posterior nares. Immediately after this there was a subsidence of the fever for over three weeks, an increase of nine pounds in weight, and a feeling of health such as had not been experienced at any time since the illness commenced. I did not see this piece of bone, as I was absent for a prolonged holiday, and only heard of the fact on my return. Unhappily, the intermission was not of very long duration. At the end of the three weeks or thereabouts the favourable anticipations which I had expressed on hearing of what had been done were falsified by a return of all the old symptoms. I still urged the employment of the local disinfectants, but there was apparently no advantageous result either from them or from general treatment of various kinds which I suggested as a supplement to this. Now, also, the lymphatic glands on both sides of the neck became greatly enlarged, indicating, as I thought, that the lesion may have extended across the middle line; and a further careful examination by Dr. Hunt, on this occasion at his own house and with good illumination, led to the discovery and loosening of another piece of necrosed bone close to the site of the previous piece. Though it could be felt with the probe to be loose it could not be detached. Before the patient had reached the bottom of the street, however, he coughed it out into his mouth, and at once sent it to Dr. Hunt, who brought it to me. It was a very small bit, but distinctly winged, showing that it extended on either side across the middle line; and thus the enlarged chain of lymphatic glands on *both* sides of the neck was easily understood. Now I fully believed and told him that the trouble was probably over, and that complete health would soon follow. In a letter received immediately after this he hopes sincerely that my "very favourable prognosis will turn out correct," and goes on to say: "Since I saw Dr. Hunt and had the piece of bone removed I have felt decidedly better." This was on Nov. 12th, 1894. Again, however, every one was doomed to be disappointed, the intermission was shorter than before, and the health seemed to become more seriously broken than ever; so much so that again and again the propriety of abandoning hope of ever being able to practise again was entertained. This, however, I strenuously and steadily opposed, insisting still on the likelihood of recovery. Previously to this date of Nov. 12th I had written to ask to be supplied with a little of the nasal secretion, for I felt that there was wanting one important link in the chain of evidence which, in my opinion, connected the symptoms with a lesion of a special kind at or behind the posterior nares—viz., a lesion which served as the breeding ground of poison-producing microbes. That link was the demonstration of the microbes themselves, and I hoped, if I could procure the nasal secretion, to be able to obtain a pure culture of these, and determine experimentally their fever-producing qualities. And this is the proper place to state that not once or twice, but over and over again, I had insisted on the following as the only adequate explanation of the variations of temperature which the patient exhibited. His charts were forwarded to me from time to time, and the explanation to which I have referred was that microbes were bred in the hitherto undiscovered and unremoved ulcerated surface; that they generated toxines, which, being introduced into the patient's system, poisoned him; that the toxines at length became strong enough and sufficient in amount to poison, or at least to lessen the activity of, themselves; and that during this period of suspended activity the febrile temperature declined, and some slight approach to restored energy was made. Please look at this temperature-chart.[1] It consists of a very long series of waves extending, as you see, over nearly two years, many of the fever periods lasting eight days, with intervals of entire or partial freedom from fever of four or five days. Did anyone ever see a fever chart of this character extending over such a length of time that was explicable on any other supposition? I show you here another, resembling it both in type and time of duration. It is that of a patient whose prolonged and nearly fatal illness was due to a local lesion in the posterior nares which disappeared when it was effectually treated. The case is one of the series to which I have alluded, and was published some months ago. In the present case I had not the advantage of observing the temperature till some time after my first visit to him, and hence on that occasion gave an alternative diagnosis either of poisoning through a local lesion or of an abnormal form of general tuberculosis, but as soon as I did see it my opinion was formed, and never for a moment varied. Still, the demonstration was not forthcoming, and I was disappointed to be informed in a letter of Nov. 6th that there was absolutely no nasal secretion to send me. As I have said, the fever returned some time after the removal of the second piece of bone, and after a period of considerable anxiety the suggestion was made that he should consult another gentleman in London eminent in the departments of laryngology and rhinology. I was not aware of this at the time, happening to be from Liverpool when he called. He saw the gentleman, and he in his turn recommended that Mr. Victor Horsley should be consulted with the view to a digital examination while the patient was under an anæsthetic and to a radical operation if necessary. The examination was made, an operation carried out, and on the following morning I received in Liverpool a letter containing the following very joyful announcement: "Dear Dr. Carter,—I hasten to let you know that Mr. Horsley operated on my husband this afternoon, and found a piece of dead bone with an ulcer behind, somewhere at the back of the posterior nares. The sphenoid was all right." The latter statement was made in consequence of a suggestion from the gentleman who had first been consulted that the symptoms were only explicable on the hypothesis of pus being pent up in the sphenoidal sinuses, which should therefore be opened and evacuated. This suggestion, when it was communicated to me, caused me so much alarm that I instantly wrote to the patient and expressed my very serious doubts as to the necessity of so formidable an operation, pointing out to him that he had never had cephalic symptoms, which I thought must certainly have been prominent if pus, as was suggested, had been pent up in the sphenoidal sinuses for a prolonged time; that the hypothesis was not necessary in order to account for his symptoms; and that no operation should be performed that was not absolutely necessary. After stating my objections to the necessity of such a hypothesis as had been framed I went on to say: "If, however, opening up the sinuses can be effected without any risk, and if thus all the parts can be more effectually antisepticised, I should say by all means have it done, for what you undoubtedly want is something that will put a stop to the necrotic process that is going on, as evidenced by the casting off of two bits of bone, and something that will purify and keep pure the parts from which these bits of bone are thrown off." The day after I wrote the letter from which I have now quoted the patient called upon me on his way up to London. The immediate result you have heard. It is a further proof, if proof were necessary, of the splendid practical surgical skill of Mr. Horsley, and of his combined boldness and conservatism. Opening into the sinuses was not

[1] The lecture was illustrated by the exhibition of temperature charts.

necessary, and hence was not done. The exact nature and extent of the operation may possibly be some day recorded by Mr. Horsley himself. All that I am concerned about here is its splendid practical results. From the day of its performance (more than two months ago) to the present moment all fever has ceased. As soon as the necessary period of rest had passed and food could be taken the body weight increased for some weeks at the rate of half a pound a day, and the patient is now as well as he has ever been in his life, and for a considerable time has been able to resume without fatigue the duties of an arduous practice. The congratulations which for the third time I ventured to offer immediately after the operation have happily been justified by the result, and the whole case presents, I think, one of the most striking examples of a supposed inexplicable fever, proving to be both explicable and removable when a source of local septic infection was once got at and removed.

The last case that I shall bring to your notice differs from those previously narrated in the fact of its having arisen in the course of a surgical affection. On Feb. 15th, 1895, I was requested to see with my friend and colleague, Mr. Robert Jones, and Dr. Chisholm of Woolton, a man aged twenty-three years, a resident of that place. This patient had always been perfectly healthy up to about a year previously, when he met with a very severe accident, which, besides bruising him generally, caused compound fracture of the bones of the right leg. As the result of this he became subject to great, and what was feared would prove a permanent, deformity, a circumstance of such serious importance to a young man that the advice of Mr. Jones was sought as to whether anything could be done to remedy it. By a series of ingeniously devised and successfully executed operations this deformity was entirely overcome, and all that remained was a very extensive area denuded of skin, which it was proposed to fill up by grafting. For this purpose plastic operation was carried out on Feb. 3rd to supply the place of the destroyed skin. Everything that prudence could suggest seemed to have been devised to ensure the success of this. A room was specially selected on account of its cheerful aspect and freedom from every suspicion of sanitary defect. Two nurses of skill and experience in antiseptic surgery were engaged. For a day or two everything went well. The wound was from the first antisepticised. No hand was allowed to touch it except after thorough cleansing with disinfectant. The bowels were carefully attended to, and every hope entertained of success, when a slight feeling of malaise on the evening of the 3rd, accompanied by a moderate rise of temperature, began to excite uneasiness. The wound was examined and found to be sweet. Day by day, however, the symptoms were intensified. The temperature rose as high as 104·4° F., the rise being preceded by a feeling of shivering and occasionally by a somewhat severe rigor, and followed by profuse sweating. Emaciation set in and was progressing somewhat rapidly, in spite of a fair amount of judiciously selected nourishment, and the utmost anxiety was felt and expressed on all hands for his condition. Ten days after the commencement of these symptoms, which continued daily and increased rather than diminished in intensity as time went on, I was asked to see him. A very careful examination of all the large organs failed to detect anything that could throw light upon the condition. The heart, lungs, kidneys, and other abdominal organs seemed to be healthy. I examined the nose and could find no evidence of disease in it that might explain the symptoms. I then asked permission to examine the granulating surface. It was carefully exposed by removal of the antiseptic dressings and certainly at first sight looked very healthy. After a thorough cleansing of my hands in a weak solution of perchloride of mercury I went round its edge. On almost every portion of this there was the white film creeping in by which the gap was being filled in, and the skin to a gentle touch seemed firm and adherent. From one minute spot, however, the white film was absent, and here the skin, instead of adhering to the subjacent tissues, felt slightly loose. On pressing over this minute bit of skin a single drop of pus was squeezed out. A cleansed probe introduced at the spot penetrated for a few lines. I ventured to express the belief that absorption of septic material through this very small spot, that seemed to have escaped the reach of the antiseptics, was sufficient to account for all the symptoms, and with the view of putting this to the test we agreed to instruct the nurses to inject a weak solution of perchloride of mercury by means of a small syringe, whose fine nozzle was to be introduced under the skin at the point where it had admitted the probe, but to make no other alteration in treatment, which had consisted mainly of the administration of quinine. The moment this was done the temperature fell to normal and never again rose. The patient has for some time been at the seaside convalescent.

THE OPERATION FOR THE RADICAL CURE OF HYDROCELE BY EXCISION OF THE SAC, ILLUSTRATED BY A SERIES OF CASES.[1]

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I VENTURE to introduce this subject because it has not yet been discussed by the Medical Society of London, also because the operation for the cure of hydrocele by excision of the sac does not seem to be so well known as it undoubtedly deserves to be. During the last ten years (1885 to 1894 inclusive) one hundred and thirteen cases of hydrocele were treated by operation in the wards of St. Bartholomew's Hospital.[2] only thirteen of these are said to have been treated by incision and excision of the sac wall. Forty-eight of the remainder were injected with iodine; forty-five are said to have had radical cure done; and, lastly, seven were treated with setons. With the help of Mr. E. G. B. Adams, to whom I am under a great obligation, I have examined the notes of these cases. There is no doubt but that the forty-five who are said to have been treated by "radical cure" had the hydrocele injected with iodine, black wash, or carbolic acid, the last two being used in a very few instances. Hydrocele is such a common disease and causes so much mental and physical inconvenience that some good reason must exist to explain why only 110 cases passed through the wards of a great hospital in a decade. I myself am inclined to attribute it in a measure to the uncertainty of injection, and to the fact that besides being uncertain it is very painful. My own observations have long caused me to look askance at this procedure. That it often failed there could be no doubt, but I did not know in what proportion; that it was exceedingly painful was also evident; and that epididymitis and orchitis were not infrequent consequences could not be denied. Now, whatever the patients themselves might think, it seems evident that one would be chary in recommending an operation which, after much pain and discomfort, might not succeed, or which might leave the patient with an additional disease. With regard to the question of failure I was not astonished to read in Mr. Jacobson's recent work that he estimates the failures after injection at from 8 to 10 per cent.[3] The exhaustive labours of this writer and his temperate and judicial attitude give great weight to this statement.

With the help of Mr. Adams I have examined the notes of the cases of hydrocele in the wards of St. Bartholomew's Hospital during the last ten years. We have abstracted the notes of seventy-four patients who had been treated by injection, the total number of injections being ninety-three. In six of these the ultimate result was doubtful; they were not cured when last seen.[4] In twenty-four the injection had undoubtedly failed. The above seems a very high proportion of failures. It is to be remembered, however, that many of the cases may have been admitted into the hospital because they were known to be intractable. Nevertheless, they deepen my own distrust of the so-called cure by injection. The history of these twenty-four failures is remarkable: ten failed after one injection, eleven had two injections, one had three injections, and two had four. In those which had two, three, or four injections the result is in many cases unknown, but some were ultimately treated by excision of the sac. Of the two cases which were tapped four times, one, a

[1] Read before the Medical Society of London on Oct. 14th, 1895.
[2] St. Bartholomew's Hospital Reports, Statistical Tables, prepared by the Surgical Registrar. Three cases treated by seton are accidentally omitted in the year 1889.
[3] The Diseases of the Male Organs of Generation, p. 141. London, 1893.
[4] One has since written to say he considers himself well, the swelling having "gone right down." I am greatly obliged to Mr. Maxwell for much help in obtaining the addresses of these cases.

medical man, tells me that he now, after much suffering, has a spermatocele; the other seems to have been cured by carbolic acid after three injections with iodine. The patient who was injected three times had a most remarkable career. His hydrocele, which is said to have followed a blow, was tapped, thrice injected with iodine, twice incised and drained, and, finally, laid open, painted with liquor iodi, and packed with iodoform gauze. There is reason to believe that this was successful. The case was described by Mr. Willett in the discussion before the Royal Medical and Chirurgical Society.[5] It may be noticed that excision of the parietal layer of the tunica vaginalis was not performed.

Out of the twenty-four operations which I have now done for the cure of passive hydrocele, two had previously been injected with iodine and relapsed. When the tunica vaginalis was opened no adhesions were found, but in one the testicle was chronically inflamed, although the injection had been done eighteen months before the operation, and the other has still a nodular condition of the testis and epididymis. These two cases of relapse are included in the twenty-four which have just been mentioned. Thus the chances of relapse after an attempt at cure by injection are very considerable; rather over 32 per cent. according to the statistics of St. Bartholomew's Hospital. Evidently the operation is not one to be recommended with confidence. With regard to the painfulness of it, I feel sure (in spite of the enthusiastic statements of some surgeons) that it is considerable. Putting aside what I myself have seen, it is clear from the notes that, although cocaine was freely used, pain which needed morphia for its alleviation was quite common and occasionally was so severe as to make the patient sick. It seems unreasonable to suppose that a violent irritant can be applied to the surface of a sensitive organ like the testicle without causing considerable pain. Two of the patients upon whom I operated for radical cure of hydrocele by excision of the sac had, as I have just said, previously been operated upon by the injection of iodine. They were most emphatic that the excision was much less painful, and was, indeed, comparatively comfortable compared with injection. Nor am I convinced that injection with carbolic acid has the advantages which some have claimed for it. I can only find that five patients were injected with carbolic acid in the wards of St. Bartholomew's Hospital in the ten years 1885 to 1894 inclusive. They received six injections. Two of these injections failed. In one case a second injection with carbolic acid seems to have succeeded, but it is said that the epididymis was much enlarged. In a second case an unsuccessful injection with carbolic acid was followed by an unsuccessful injection with iodine. Finally, the parietal layer of the tunica vaginalis was excised. The other three patients were probably cured by one injection with carbolic acid. One is said to have suffered pain. This might be expected. Experiments upon animals incline me to think that carbolic acid is a violent remedy, and no one can deny that the testicle is a sensitive organ.

I do not propose to discuss all the alternatives to injection. A case has been mentioned in which incision and drainage failed twice. A diverticulum of the tunica vaginalis may, it is said, have been the cause of these persistent failures. Setons were inserted seven times into the hydroceles of infants and young boys. One of these is known to have relapsed and had a seton inserted for the second time. Partial excision of the parietal layer of the tunica vaginalis has also been tried. In one of these it is said that "so much of the sac was removed that it was difficult to bring the remainder together." The wound was drained for fourteen days, but nevertheless, before the man left "a small fluid tumour had already returned." Incision of the tunica vaginalis and after-packing with lint and subsequent sepsis and suppuration is a repugnant procedure. Excision of the sac, on the other hand, may be rendered an aseptic process, and seems to me to afford an excellent prospect of success. It seems reasonable to suppose that the removal of about nine-tenths of the diseased secreting membrane, and the exposure of what is left to the loose cellular tissue of the scrotum, could hardly be followed by a reaccumulation of the hydrocele fluid. The results of the operation will, I think, go far to show that this assumption is correct. And here it is to be said that the title of this paper is not strictly applicable to the operation performed upon ordinary hydrocele of the tunica vaginalis. For the cure of these only the parietal layer of the tunica vaginalis has been excised (Fig. 1), but in encysted hydrocele the whole sac is cut away. I have now excised the whole of the parietal layer of the tunica vaginalis twenty-five times. All of these were done for the cure of hydrocele, with the exception of one which was done for hæmatocele. No attempt whatever was made to select the cases. The youngest was sixteen years old, the oldest sixty-eight. Some could hardly be considered good subjects for an operation. A man aged forty-one had been a heavy drinker. His face was covered with acne rosacea. He had a high-tension pulse and probably some aortic stenosis. His urine contained a trace of albumen. He took ether well and suffered no apparent harm from the operation. A man aged sixty-three who had acne admitted that he drank; another, who was a plumber, suffered from lead poisoning; several had chronic bronchitis. This is a very objectionable complication, on account of the anæsthetic. However, by choosing the warm months of the year for the operation and by skilful administration of the anæsthetic this complication need cause little anxiety. In several cases the hydrocele was accompanied by other affections. In one a hydrocele on the right side and a varicocele on the left were operated upon at the same time. In another both sides were operated upon at the same time, the hydrocele being double. In another case the presence of an acquired hernia upon the same side as the hydrocele made no difference. A man who had a hydrocele and organic strictures of the urethra was operated upon first for the cure of the hydrocele, and a week later for the cure of the strictures. The last operation was followed by orchitis. In one case the hydrocele was bilocular. The testicle was surrounded by an ordinary hydrocele of the tunica vaginalis. A second large sac, full of about half a pint of clear yellow fluid, lay above the head of the epididymis. Both sacs were treated in the usual manner, the upper one being entirely removed. The operation was performed for various reasons—in some because of the size and weight of the hydrocele; in others for pain and discomfort, especially whilst riding upon horseback. Some were done to enable the patients to enter the army or other public services. One was done to enable the patient to wear a truss for a hernia which was unsuitable for radical cure. Some were performed because the patients were weary of being tapped; one man had been tapped twenty-four times. One patient was alarmed because his hydrocele had been burst at football. This accident had not brought about a cure, as happened to a man I saw under Mr. Butlin's care, and of whom it is stated that his hydrocele had been burst by the wheel of a wagon passing over it. Another reason might, I think, influence the decision. At various times I have dissected a number of hydroceles. In the large ones of long duration the testicle had become flattened out and wasted, and apparently spoilt. In some of the operative cases [the gland was considerably altered, the epididymis having become separated from the body of the testis.

Before operating for the radical cure of hydrocele by excision of the sac it is, as a rule, advisable to tap once to ascertain the condition of the testis. It would be disappointing to find a gumma, or a mass of tubercle, or even a malignant growth. Inasmuch as the fluid in a hydrocele is quite thin, like water, a very small trochar and cannula suffice for the tapping. A cannula of 2 mm. diameter is quite large enough. The instrument usually figured in text-books is a relic of mediæval surgery. Strange to say, one of those upon whom I intended to operate underwent spontaneous cure. A man aged sixty-five came in January, 1894, with a hydrocele of two years' duration. It had been tapped five times. He had bronchitis, so I tapped it again and told him to come in June to be cured. He returned in June with no trace of hydrocele, and said that after the tapping it had rapidly refilled and then got quickly well. He remains quite well of his hydrocele at this date (October, 1895). He attributed his cure to some spirits of camphor which he was taking. I also find it stated in the notes that a youth aged seventeen, who was under the care of Mr. Thomas Smith, had undergone spontaneous cure of his hydrocele. He had had it three years, and it had been injected once with iodine, but had relapsed. No reason could be assigned for the cure. This event is, of course, too rare to have any practical bearing upon the question of operation.

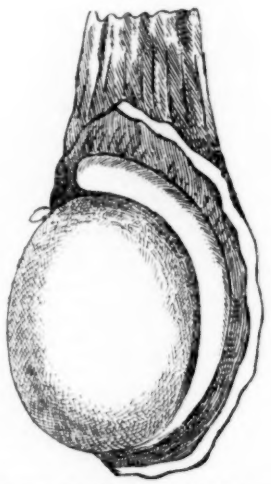
The operation of excision of the parietal layer of the tunica vaginalis is exceedingly simple. An incision is made the whole length of the long axis of the hydrocele. The sac is exposed and separated from the scrotum until

[5] THE LANCET, March 3rd, 1888.

the spermatic vessels are almost in view. It matters little if the testicle is entirely withdrawn from the scrotum. A puncture is made to let out the hydrocele fluid. This small opening is enlarged to admit the finger to ascertain the position of the testicle, epididymis, and vas deferens. Occasionally the vas is upon the front of the sac, having been displaced. The testis, too, is sometimes in front, as in one of my cases. As a rule this point will have cleared up before the operation is begun; but when the sac is thick the shadow of the testis cannot be seen. The finger in the sac also makes out the exact limits of the epididymis and of the testicle. In big old hydroceles these organs are flattened out and sometimes pulled apart. In one of the cases upon which I operated this had happened, and the epididymis, separated from the testis, lay almost in front of the sac.

These points having been cleared up the whole of the parietal layer of the tunica vaginalis is cut away to within a quarter of an inch of the testicle and epididymis, so that these organs are left in the condition shown in the accompanying sketch. (Fig. 1.) Much misconception seems to

FIG. 1.



Showing how much of the tunica vaginalis is removed for the cure of hydrocele.

exist as to the quantity of tunica vaginalis which is taken away. I am continually asked whether the visceral layer is dissected off the testis and epididymis. Sometimes in very big hydroceles the tunica vaginalis runs up the front of the spermatic cord. This prolongation must be thoroughly removed. The arrest of hæmorrhage is of the utmost importance in this, as in other operations upon the scrotum. A hæmatoma easily forms in the scrotum and detracts considerably from the comfort of the patient and from the success of the operation. In one of my cases no vessel required ligature, but as a rule eight or twelve have to be secured with fine twisted silk. As a further provision against a hæmatoma a large drainage-tube (¼ in. diameter) is laid along the depths of the wound and brought out at its upper angle. The rest of the skin incision is closed with fishing-gut sutures placed about a third of an inch apart. Trouble expended in obtaining accurate apposition of the wound is well repaid. The skin of the scrotum heals with great rapidity, and the union becomes quite strong in a week. It may be observed that no caustic is applied to the visceral layer of the tunica vaginalis, which is, of course, left behind. I do not think such applications are required, and they would increase the pain and also cause orchitis. As I have said, twenty-four hydroceles were treated in this way. In addition a hæmatocele was met with, and received the same treatment. After all the blood and clot had been taken away the whole of the parietal layer of the tunica vaginalis was excised. The after-treatment was the same as that of the hydrocele cases, and will be described presently. Repair was rapid, and the after-result left nothing to be desired.

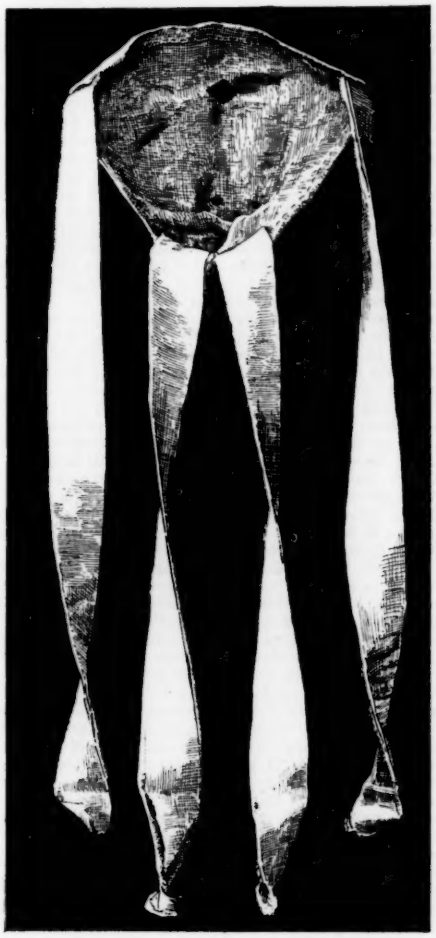
It would not, in my opinion, be justifiable to perform these operations for the cure of hydrocele without stringent aseptic precautions. Inasmuch as surgeons differ as to what these should be perhaps I may be allowed to say very briefly what was done in all of these operations. The aseptic precautions pertain mainly to the preparation of the patient, of the surgeon and his assistant, and of the instruments and materials. The evening before the operation the patient is thoroughly shaved and has a hot bath with abundant soaping and scrubbing. The skin having been cleansed as far as can be done by soaping and scrubbing, it is further prepared for disinfection by extracting its fatty matter with ether or turpentine. It is disinfected by being washed for two minutes with a 1 in 500 solution of biniodide of mercury in rectified or methylated spirit. This is washed away with biniodide of mercury lotion (1 in 2000), and the skin is covered with a covering of carbolic gauze wet with the same lotion. It is, I think, advisable to add some glycerine to this lotion to help to keep the covering moist and assist the chemical to penetrate the skin. It is usual, also, to give a mild purge the night before the operation. These precautions are used for hospital patients; but for others less drastic measures usually suffice. The hands of the surgeon and of his assistants are apt to be a source of infection. After cutting the nails short, and scrubbing for three minutes with soap and hot water, we disinfect them by soaking for two minutes in the same solution of spirit and biniodide of mercury (1 in 500) as was used for the patient's skin. This has hardly any harmful effect even upon delicate skin. My hands are quite unable to bear the strong solutions of carbolic acid which some surgeons recommend. Very few instruments are required; a knife, a pair of scissors, a needle, and a few pairs of pressure forceps are all that is necessary. These, together with the drainage-tube, are sterilised by boiling for a quarter of an hour. Fine twisted silk (No. 0 size) is used to ligature bleeding vessels, and fishing gut for closing the incision. These are also sterilised by boiling, and together with the instruments are afterwards kept in freshly made carbolic solution (1 in 40). After the patient has been anæsthetised the field of operation is prepared by removing the protective dressing and thoroughly wrapping up the penis in carbolic gauze which has been soaked in binionide of mercury lotion (1 in 2000). This "phallic shield" is of the greatest importance in this and other operations about the genital organs, especially in operations for varicocele and for the radical cure of hernia. The area of operation is surrounded with towels sterilised by boiling or steaming for half an hour, and kept wet with 1 in 40 carbolic lotion. One of these towels is passed across the thighs and under the hydrocele to support it. Before making the incision the skin receives a final swabbing with spirit and biniodide, and is then sluiced with 1 in 2000 biniodide of mercury lotion, which is used throughout the operation. I use sponges prepared by the sulphurous acid method.[6] The wound is dressed as follows: After a thorough dusting with iodoform crystals the scrotum is covered with a layer of 5 per cent. carbolic gauze soaked in biniodide of mercury lotion (1 in 2000). This is covered with alembroth wool and an outside dressing applied. The outside dressing is the usual eight-fold layer of carbolic gauze with a covering of jaconet. It is accurately cut to pattern and fitted with great care. (Fig. 2.) It is triangular, with an aperture near the base for the penis to pass through. To the apex of the triangle two strong bands are fixed. When the dressing is in position these bands fix its apex against the perineum and are carried round the thighs to meet the pelvic band in front. This is a similar band of soft material which is fastened to the other angles of the dressing. They secure it firmly in position by being carried round the pelvis. The straps are best made of stout bandage or of webbing. After they have been pulled tight a little extra alembroth wool may be stuffed beneath the dressing to exclude air and make some pressure upon the scrotum. I have used this dressing now for a great number of cases of radical cure of hydrocele and varicocele, for castration, and other operations on the scrotum. I have no doubt but that other surgeons have bethought themselves of such a simple device. It is quite safe and very easy to adjust. The patients find it most comfortable, and are able to turn about in bed and if necessary get up with it on. It enables us to dispense with bandages, always

[6] Report upon Aseptic and Septic Surgical Cases, with special reference to the Disinfection of Skin, Sponges, and Towels. C. B. Lockwood. Brit. Med. Jour., Jan. 27th, 1894.

difficult to apply in this region, and notoriously insecure. The after-treatment of these cases is simple and uniform. After the anæsthetic has passed off any light diet may be given, and the minor indulgences need not be stopped. The dressing is taken off at the end of forty-eight hours for the removal of the drainage-tube. This is done with the same precautions as those used for the operation. On the seventh or eighth day the dressing is finally removed and a suspensory bandage of linen applied. The patient now gets up to lie on a couch, and is able to begin work again within a fortnight.

The immediate results of excision of the parietal layer of the tunica vaginalis seem to leave little to be desired. The

FIG. 2.



Outside dressing used after operations upon the scrotum. From a photograph by Mr. Horder.

asepsis, which is so essential to safety, seems easy to secure. Only one of the cases had subacute suppuration, which was by no means severe. Owing to his physical conformation urine escaped several times into the dressing. We were aware of the likelihood of this accident and endeavoured to shut off the wound with iodoform, collodion, and so forth. The man, however, was negligent and unintelligent, and did little to aid our efforts. Seven months after the operation he was quite cured, and, except for the scar, it would be impossible to find anything abnormal.

A striking feature of these cases has been the absence of orchitis. The case which has just been mentioned is supposed to have had some orchitis, and a youth was found to have some orchitis at the operation; but I am not aware that any of the others had it. Indeed, the testicle seems to be surprisingly tolerant of any reasonable amount of handling. With the above exception the after-course of these twenty-five cases has been quite monotonous. The drainage-tube was withdrawn in from forty to forty-eight hours, and the stitches removed six days later. By this time the wound was healed and merely required protecting with a little wool. After the removal of the stitches the patient was provided with a linen suspender, and got up to lie upon a couch. He was usually fit for work within a fortnight. The patients themselves greatly appreciate the relief which the operation affords, and have been profuse in their expressions of gratitude.

I think the foregoing shows that when excision of the parietal tunica vaginalis is done with strict aseptic precautions the immediate results of the operation leave little to be desired. The greatest pains have also been taken to ascertain the after-results. It may be noted that we have to deal with twenty-three patients upon whom excision of the parietal layer of the tunica vaginalis had been practised twenty-four times, the hydrocele having been on both sides in one instance.

Everyone will acknowledge the extreme difficulty of tracing cases in London. I have, however, succeeded in following up sixteen of these patients. Fourteen have been seen by myself or other surgeons, and are all cured, including the case of double hydrocele. Two have written to say they are cured. One of these patients has been well for close upon two years, two over eighteen months, and none less than three months. To these may be added another case, that of a man upon whom my friend and colleague, Mr. Bowlby, performed exactly the same operation. It was done on Nov. 7th, 1894, and the patient is now quite well (Oct. 4th, 1895).[7] Thus I have not yet met with a relapse after complete aseptic excision of the parietal layer of the tunica vaginalis. I am fully aware that relapses have been described;[8] but it is probable that those cases were not operated upon in the same way as those dealt with in this communication.

Examination of cases which have been operated upon shows that the scar of the incision is hardly visible. The testicle slips about quite freely within the scrotum. The gland in most cases is larger than its fellow, but quite soft and painless. I have observed this slight enlargement in cases which have been cured by iodine. It has probably nothing to do with the operation, but is related in some way to the hydrocele.

It is not intended upon this occasion to touch upon the pathology of hydrocele. Doubtless more than one cause has to be considered. Dr. Kanthack, pathologist to St. Bartholomew's Hospital, kindly examined the tunica vaginalis removed from two cases of passive hydrocele. He found in the thickened membrane evidence of chronic inflammation. At my suggestion tubercle bacilli were sought for, but none were found. The mammillæ scattered over the thickened tunica vaginalis in cases of hydrocele are very suggestive of tubercle.

Inasmuch as they have the closest relationship to the cure of ordinary passive hydrocele, I propose to mention very briefly a case of operation for congenital hydrocele and another one in which there was hydrocele associated with hernia. The first was that of a youth who had a congenital hydrocele of the right side. The fluid in the sac could be reduced into the abdomen. An incision was made over the inguinal canal, and a long, narrow peritoneal tube was found leading into the general peritoneal cavity. This was separated from the spermatic cord and divided, and the stump fastened beneath the arching fibres of the internal oblique and transversalis.[9] The inguinal canal did not require repairing, but the external abdominal ring was closed to its proper size with the usual silk sutures. No drain was inserted, and the wound healed by first intention. It will have been noticed that the tunica vaginalis was not touched, but was left alone, as in an ordinary case of congenital hernia. I now regret that I did not excise the parietal

[7] The patient, together with fourteen others, was shown to the Medical Society at the meeting.

[8] Some remarks on the Radical Cure of Hydrocele, with Notes of Two Cases of Excision of the Tunica Vaginalis, followed by Recurrence of the Hydrocele. Henry Morris, Transactions of the Royal Medical and Chirurgical Society, Feb. 28th, 1888. For report vide THE LANCET, March 3rd, 1888.

[9] The Radical Cure of Femoral and Inguinal Hernia. By C. B. Lockwood. THE LANCET, Nov. 25th, 1893.

layer, because five months after the operation there was some swelling about the testicle and perhaps a little fluid in the tunica vaginalis. The removal of the parietal layer of the tunica vaginalis in a case of this kind would be a very slight addition to the operation. In future I shall certainly take it away. Indeed, in another case of hydrocele which was associated with hernia this proceeding was adopted. The hydrocele seemed like one of the ordinary kind, but the cord was thickened, and it was thought that there was a narrow and patent processus vaginalis plugged with a strip of omentum. The operation which I usually perform for the radical cure of hernia was done.[10] The peritoneal canal was occluded and the inguinal canal repaired. The lower part of the sac was laid open and in great part removed. It was difficult to make out its exact relation to the testicle, but it closely enveloped it and was, I thought, composed of the upper but not the lower part of the tunica vaginalis. This wound was not drained, and healed by first intention. Mr. Withers informs me that the hydrocele is cured. It is hardly necessary to point out that the above was a chronic hydrocele of a hernial sac. I have many times met with acute hydrocele in strangulated hernia, but in these it seems unnecessary to excise any of the tunica vaginalis. I have never known the effusion to return and persist after it has been evacuated.

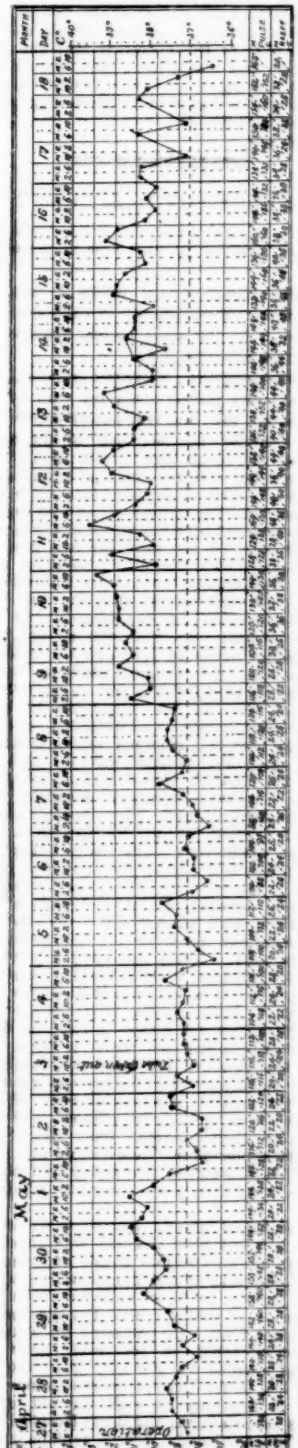
Encysted hydroceles of the spermatic cord are also most suitable for excision of the sac. Apart from cases of hernia, I have not myself had an opportunity of dissecting out the sac of an encysted hydrocele of the cord. It is, however, a simple and safe procedure and much to be preferred to injections. From the nature of the case a relapse could not occur. Two patients who were operated upon by other surgeons write to say they are cured.

A CASE OF EXTRA-UTERINE FŒTATION; OPERATION NEAR FULL TERM; CHILD LIVING; DEATH OF MOTHER THREE WEEKS AFTER DELIVERY.

BY MONTAGU HANDFIELD-JONES, M.D. LOND.,
OBSTETRIC PHYSICIAN TO, AND LECTURER ON MIDWIFERY AND DISEASES OF WOMEN AT, ST. MARY'S HOSPITAL.

THE patient was a woman aged twenty-six years, married seven years previously, and had one child (a boy). This confinement took place twelve months after marriage, was quite normal, and the child, who was healthy, lived twelve months. There had been no miscarriage. Menstruation commenced at the age of thirteen, had always been regular, not very free in amount, and without pain. The patient had been quite well both before and since her confinement, and had menstruated regularly till the last week in August, 1891. She saw a little at the end of November, 1891, and again in December, 1891, about the time of her ordinary monthly periods; the flow was scanty, but there was no pain, except with the loss in November. On Nov. 24th, 1891, she commenced to vomit and was sick for two days. During this time she says that she had pain right across her stomach. She took to her bed and sent for Mr. Archer Wood of Dulwich. Mr. Wood found her markedly anæmic and very much prostrated. On examining the abdomen he found a hard, rounded lump rising above the right Poupart's ligament and apparently springing from out of the true pelvis. The patient complained of a few "pleuritic pains," but these ceased after a few days and improvement took place. A similar attack occurred a week later, and a third after another fortnight's interval, but these two were not so severe as the first attack. After these attacks there was no return of pain, but as the lump did not disappear the patient was not allowed to leave her bed. The lump was first noticed on the right side three days after the first attack of pain. On Dec. 15th Mr. Archer Wood asked me to see the patient in consultation. On this date she was feeling well, free from pain, and anxious to be allowed to leave her bed. There was a slight degree of anæmia. The breasts were suggestive of pregnancy. The abdomen was full, and above the right Poupart's ligament there was a tumour with a rounded top, firm and solid to palpation, fixed in position, very little tender to the touch, and reaching half-way up to the level of the umbilicus. By vaginal examination the uterus was found pushed over to the left of the middle line and fixed; while to the right and behind there was a firm mass which depressed the vaginal roof on that side and was evidently continuous with the abdominal tumour. The diagnosis pointed clearly to an extra-uterine pregnancy on the right side, and the symptoms suggested the occurrence of rupture with a moderate out-pouring of blood. As the patient was so well it was decided to leave matters alone and watch the further progress of events, the patient meanwhile remaining absolutely in bed. About the middle of January, 1892, Mr. Archer Wood wrote to tell me that all was going on favourably, and that there had not been any further sign of bleeding, but he thought that the tumour was increasing in size. Under these conditions we decided to move the patient into St. Mary's Hospital, so that I might have her under close observation and be able to operate at once if need arose. On Feb. 3rd the patient was admitted to St. Mary's Hospital, and the following notes were taken. On inspection of the abdomen there was found a dome-shaped swelling in the right iliac region which reached above the umbilicus to the height of two inches. The skin was freely movable over the tumour and there was complete dulness on percussion. No movements or adventitious sounds could be detected. The following were the measurements: right anterior superior iliac spine to umbilicus, 5¼ in.; left ditto, 5½ in.; umbilicus to xiphoid cartilage, 5¾ in.; umbilicus to symphysis pubis, 6½ in.; left side (horizontal), spinal column to umbilicus, 12½ in.; right side, ditto, 13¾ in. (over the most prominent part of the tumour). On vaginal examination the body of the uterus was felt pushed over to the left side; the cervix pointed backwards and to the right. The body of the uterus was considerably enlarged, and the right fornix of the vagina was occupied by a hard swelling which seemed to be continuous with the abdominal tumour. The swelling in the right iliac region was not obviously distinct from the uterus. On Feb. 11th the patient said she had had no pain since admission. No movements had been felt, and no sounds had been heard over the tumour. On Feb. 19th the circumference of the body measured over the most prominent part of the tumour 30 in. The following were the measurements: left anterior superior spine to umbilicus, 6½ in.; right ditto, 5½ in.; umbilicus to xiphoid cartilage, 6½ in.; umbilicus to symphysis pubis, 6¾ in. On the night of the 18th, about 12 o'clock, the patient was awakened by a sharp pain in her right side, which passed from behind forwards through the tumour. She went to sleep in an hour's time, but the pain awakened her at intervals for three or four hours. She did not feel at all sick and felt quite well again in the morning. On Feb. 23rd there was no return of pain. On the anterior abdominal wall on the left side, half-way between the anterior superior iliac spine and the umbilicus, fœtal movements were distinctly felt. On March 10th the measurement round the abdomen was 31½ in. On March 28th the patient said she felt movements every day, but had no pain. The tumour was steadily enlarging upwards and to the right. The urine was acid, contained no albumin, and the specific gravity was 1026. It deposited urates. The measurement around the abdomen equalled 32¼ in. On April 12th the patient was progressing favourably. The girth now equalled 33½ in. So far no shreds of membrane or decidual cast had been expelled. As by the end of this month the patient would have reached about the 250th day of gestation, it had been decided to operate at that time and not go quite up to full term. On April 27th the abdomen of the patient closely resembled the appearance of an ordinary case of gravidity about the end of the eighth month, except that there was a marked bossing on the right side between the lower ribs and Poupart's ligament. Careful palpation led to the belief that the swelling was caused by the placenta, a view which was found to be correct at the operation. By combined abdominal and vaginal examination the child was felt to be lying obliquely to the vertical axis of the abdomen; the head resting on the brim of the pelvis towards the left side, the back of the fœtus directed forwards, and the breech high up to the right of the middle line. On percussion dulness was found nearly up to the xiphoid cartilage, extending outwards into the right flank, but good resonance was obtained on the left side of the abdomen. Rising about three inches above the level of the symphysis pubis there

[10] THE LANCET, Nov. 25th, 1893.



was a rounded swelling which could be differentiated from the fœtal tumour and which was almost certainly the hypertrophied uterus. The vaginal conditions had not markedly changed since the last examination. On this date the patient was moved into the ovariotomy ward, and after chloroform had been administered by Mr. Henry Davis my colleagues Dr. Braxton Hicks and Dr. Gow kindly assisted me in the operation of removing the child by abdominal section. When the abdominal parietes had been divided by a long incision reaching from above the umbilicus to within two and a half inches of the symphysis, the following condition was revealed. Below was the hypertrophied body of the uterus rising some three inches above the brim of the pelvis; above this the smooth and convex surface of the fœtal membranes was seen, overlapping the membranes on the left side, and above were coils of intestine. Having picked the membranes about the centre of the exposed surface and incised them with scissors, several ounces of clear, watery fluid escaped, and then a second bag of membranes came into view. Manifestly the fluid which had escaped was situated between the chorion and amnion. The latter membrane was now incised and a sharp rush of clear amniotic fluid escaped. The fœtus was now lifted out of the abdomen, the cord rapidly tied, and the child handed over to an assistant; a sharp, lusty cry testified to its vitality and vigour. Dr. Braxton Hicks examined the placenta at this stage with me to decide the question of further treatment, but as blood began to well up rapidly from the deep part of the organ it was deemed unadvisable to attempt its removal. As far as we could ascertain the organ was attached low down in the pelvis on the right side over the right iliac fossa, and then spread up over the right flank till it was reflected by the diaphragm and ribs into the right abdominal wall. The umbilical cord was now cut short and dropped back into the sac of the membranes, the intestines were carefully sponged, and the cut edges of the membranes having been gathered up were sutured to the edges of the abdominal incision; finally, the abdominal wound was closed except for two inches at its lower part, where a rubber drainage-tube was passed down into the sac of the membranes. The wound was now dressed in the manner usual after an ovariotomy, and a many-tailed binder having been applied the patient was placed back in bed. The pulse was 140, the respiration 26, and the temperature 98·3° F. The patient had a rapid pulse an hour after the operation, but otherwise showed no marked symptom of shock. The infant was of the female sex, was well nourished, and weighed nearly seven pounds; there was a curious flattening of the left parietal bone, due apparently to pressure of the child's skull against the bony wall of the pelvis. At first the child was unable to take milk from the feeding bottle (owing apparently to some difficulty in sucking) and had to be fed by a catheter passed back through the nose; but in a few weeks' time this trouble had passed and the infant was brought up by hand in the ordinary way. When she left the hospital at the end of three months she was in all respects a well-nourished and well-developed child.

After-history.—The following notes taken by my clerk, Mr. Frank Easton, give a fair view of the patient's progress after the operation. On May 3rd she was very cheerful. The wound was dressed and the tube taken out. The discharge was less sanious and less copious. The temperature kept down and the pulse became slower, being 112, as against 140 just after the operation and 160 two days later. The child was jaundiced, but was getting on well; she was fed by the tube being passed into the stomach. On May 4th the stitches were removed. The bowels were freely relieved. The abdomen was much less distended and was soft and natural. On May 6th the patient slept well and took solid food with a good appetite. She was propped up in bed and did some wool-work. The pulse-rate was 88 in the evening. On May 8th the patient was not so well and was drowsy. The pulse was quicker and the tongue was furred. The cavity of the membranes had greatly shrunk and the anterior surface of the placenta bulged up into the abdominal opening. The discharge was perfectly sweet. On May 11th she was sick twice and still drowsy; some sloughs of membranes were removed through the abdominal wound. The temperature was 102°. The area of dulness over the placental site was diminishing. On May 12th the patient was worse; she disliked her food and looked sallow. From this date she slowly lost flesh and strength, drifted into a typhoid condition, and died on May 18th.

Necropsy.—On opening the abdomen the fœtal membranes were found firmly adherent round the abdominal incision, entirely shutting off the peritoneal cavity. Some coils of intestine were adherent around the fœtal sac, but there was no sign of any general peritonitis. The uterus corresponded in size to a three months' gestation, was somewhat displaced to the left, and contained a well-marked decidual membrane, which was detached and loose in the lower zone, but adherent still above. The left ovary and tube were somewhat thickened and matted, but otherwise were normal. The right tube was much elongated and continuous at what was apparently its fimbriated end with the fœtal sac. The right ovary was represented by a small nodular mass situated at the lower part of the fœtal sac. The placenta spread upwards from the pelvis, and the side of the uterus was adherent over the whole right iliac fossa, then passed upwards over the region of the right kidney, and then passed forwards on to the right side of the abdominal wall. The aspect of the peritoneum at the site of attachment was so altered that it was difficult to trace its relations. Numerous vessels passed from the under surface of the placenta to join the neighbouring organs and tissues. The largest vascular connexion to the underlying tissues was a large vein which opened directly into the common iliac vein of that side, and which was necessarily torn across in peeling off the placenta. The placental tissue was healthy throughout, but at the spot where the mass had bulged into the abdominal wound a slough the size of a crown piece was being gradually thrown off. No pus was found anywhere, but low down in the right of the true pelvis, below the placental attachment, there existed a pocket of red grumous fluid amounting to about an ounce and a half, and formed apparently of blood undergoing retrograde change.

Remarks.—In the light of the post-mortem examination it is easy to trace the course and development of this case. Clearly an impregnated ovum became arrested in the ampulla of the right tube, or at all events in the outer part of this tube. As growth proceeded, the Fallopian tube became distended, and probably the membranes of the increasing ovum bulged out from the tube into the peritoneal cavity in the manner described by Mr. Bland Sutton and others. At the time when Mr. Archer Wood was called to see the patient a partial separation of some of the chorionic villi had taken place and internal hæmorrhage had resulted—or, in other words, a tubal miscarriage was threatened. The blood loss and separation were not, however, sufficient to kill the child or to destroy the vitality of the ovum, and so growth proceeded. The pain, marked anæmia, and prostration leave very little doubt as to the occurrence of the internal bleeding, and the recurrence in a slighter form of the accident at one week's and again at two weeks' interval renders the probability even greater. The further growth of the ovum dragging up and elongating the involved Fallopian tube and leading to the implication of other neighbouring organs and tissues is just what one might expect. It is interesting to note that, though a marked decidual membrane had been formed inside the uterus, this was retained throughout the pregnancy and was not thrown off in the early months in the usual way. There was little in the necropsy to explain the cause of death. No general peritonitis existed, no intestinal obstruction, and no collection of pus, and yet the clinical history and temperature chart suggest most strongly that the patient died from some form of blood poisoning. Bearing in mind the existence of a superficial slough on the part of the placenta which bulged into the abdominal wound and was most exposed to the action of microbes, it would seem probable that this was the source and supply of the septic material which poisoned and overpowered the feeble resisting powers of the woman. In all cases of extra-uterine fœtation advanced to nearly full term the most important and the most difficult question is the method of dealing with the placenta. The necropsy in this case showed most clearly that any attempt (either primary or secondary) to remove the afterbirth would have led to rupture of the large iliac vein and most certainly to a fatal hæmorrhage. The method which was adopted in the present instance must always expose the patient to the risk of septic poisoning, and I shall not again willingly resort to it. Should another similar case come under my care I shall tie and divide the cord close to the placenta, remove as much of the membranes as may be possible, and then close the abdominal incision entirely, leaving the placenta untouched. There would seem to be no reason why the latter organ, which has rested in the abdomen for some months in vital connexion with surrounding parts, should not continue its existence, gradually undergo retrograde change, and form a quiescent tumour of lowly organised fibroid tissue. It was interesting to note at the operation that the placenta was unusually large and developed; also to observe at the necropsy that the organ was full of dark fluid blood and that no considerable degree of blood-clotting had occurred in the large vascular spaces.

Cavendish-square, W.

THREE SUCCESSFUL SPLENECTOMIES.

BY J. BLAND SUTTON, F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE MIDDLESEX HOSPITAL.

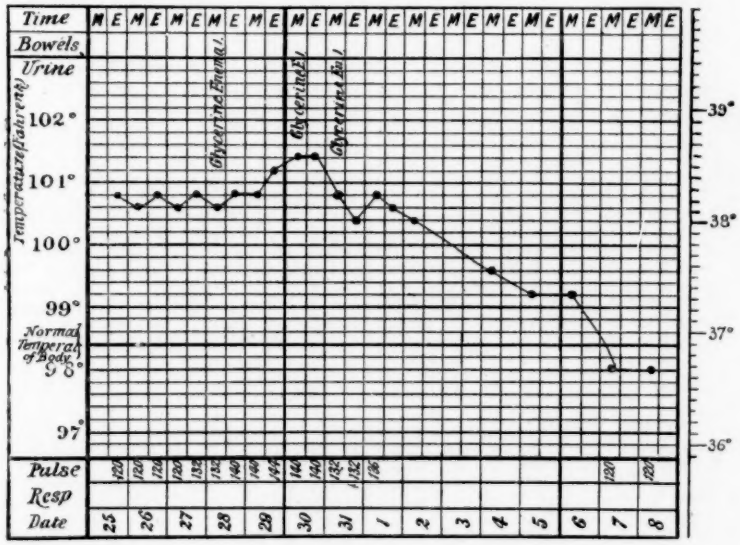
WITHIN the space of six weeks I have performed splenectomy three times, happily in each instance with a successful issue. As the cases present features of clinical interest I venture to record them.

CASE 1. *Enlarged spleen; recurrent jaundice.*—A girl aged seventeen years was placed under my care by Mr. Arthur Wyborn. She was thin and very deeply jaundiced; a large, firm tumour occupied the left half of the abdomen and extended from the costal arch to the pelvis. This tumour exhibited no notches and was dumb to auscultation. There was amenorrhœa of three months' standing, but the pelvic organs were normal. The patient stated that since the age of five years a tumour had been known to exist in her "left side" and had never troubled her until the last two years, when she began to experience dragging sensations, accompanied by jaundice. The attacks of jaundice had now become so frequent and she felt so ill that she was incapable of following her vocation. On her admission to the Chelsea Hospital for Women she was put to bed. In a few days the jaundice began to fade and the spleen markedly decreased in size. Dr. Comyns Berkeley estimated the red corpuscles to be 4,500,000 per cubic millimetre, and the leucocytes were in the proportion of 1 to 122 of the red. Leucocythæmia was excluded, and I came to the conclusion that this enlarged spleen became engorged with blood when the patient was up and about, and its drag on the stomach caused kinking of the duodenum and common bile-duct, leading to recurrent jaundice and vomiting. In August, 1895, with the full consent of my colleagues, I exposed the spleen through an incision in the left linea semilunaris. The viscus extended from the diaphragm to the true pelvis, its extremity being in contact with the uterus. Dr. Giles gently supported the spleen whilst I secured the slender parts of the gastro-splenic omentum with plaited silk. By the time I was ready to secure the main vessels the viscus had greatly diminished in bulk. There was some anxiety in securing the suspensory ligament, for the dragging necessary to bring it within the sphere of operation produced great interference with respiration. With caution this was successfully overcome and the spleen cut away. I took the opportunity to examine the gall-bladder and found it larger and thicker than usual; the stomach was large and reached below the level of the umbilicus. The wound was secured in triple layers, and the patient returned to bed. She rapidly recovered from shock, quickly convalesced, and left the hospital with rosy cheeks sixteen days after the operation, feeling, as she expressed it, "remarkably well." The spleen, deprived of blood, weighed two and a half pounds, and on microscopical examination was found to be fairly normal in structure.

CASE 2. *Enlarged spleen; anæmia.*—Whilst the patient whose case has just been detailed was under observation, Mr. Trist and Mr. D. Thurston placed under my care a girl five years of age with an abdominal swelling which they regarded, and rightly, to be an enlarged spleen. The viscus was so large as to extend across the ilio-costal space and dip into the iliac fossa. On palpating its border the characteristic notches could be felt with great distinctness. Mr. Trist had watched the girl with great interest for many months and had found drugs so useless in this instance that he deemed it necessary to seek the aid of a surgeon. The girl was admitted into Middlesex Hospital and carefully watched. Leucocythæmia, rickets, syphilis, and lardaceous disease were excluded. Coming, as this patient did, "on the heels," as it were, of Case 1, I could scarcely fail to realise

that I had really to deal with an early stage of the splenic enlargement which was found in that case. After very deliberate consideration and full explanations to the parents, with the assistance of Mr. Leopold Hudson, I deprived this patient of a spleen weighing ten ounces. She recovered in an extraordinary fashion and, thirteen days after the operation, was promenading the ward and appeared to be the most cheerful inmate of the institution. She is, as far as records show, the youngest child on whom splenectomy has been carried out.

CASE 3. *Wandering spleen.*—A thin, spare woman thirty-two years of age, the mother of five children, was placed under the care of Dr. Heywood Smith on account of a mobile tumour in the abdomen. The patient had been aware for ten years that she had a hard, movable body in her abdomen, but it had become larger and more troublesome during the last two years. Dr. Heywood Smith soon satisfied himself that the suspected tumour was a spleen, and kindly asked me to see the patient. At the consultation I found a fairly firm body, in shape like a parabolic mirror, with its convex surface in contact with the anterior wall of the abdomen, floating on the intestines. It could be pushed into the left hypochondrium or depressed into the hypogastrium; with a little manipulation it could be conveyed into the iliac, lumbar, or umbilical regions. It was clearly a wandering spleen, and is certainly the most prodigal abdominal viscus which has come under my notice. In September, with Dr. Heywood Smith's assistance, I removed this erring organ in the following manner:—When the patient was placed on the operating-table no tumour could be felt with certainty, but I perceived some resisting body when deep pressure was made in the hypogastric region. An incision was made in the left linea semilunaris, and on dipping my hand into the pelvis I recognised the spleen in the hollow of the sacrum and drew it forth. The pedicle, rounded, very thick, and hard, was transfixed and secured with four plaited silk ligatures. The detachment of the spleen was followed by an abundant flow of blood, and two forcible but narrow jets of arterial blood issued from the cut surface of the pedicle. The stump was retransfixed with three silk ligatures on the distal (spleen) side of the first row of sutures, and, as the open, everted mouths of two large arteries were visible on the face of the pedicle, for the security of the patient I ligatured them separately with silk. The pulsations of a large artery in the thick part of the pedicle were unpleasantly obvious as it was allowed to retreat into the abdomen. The wound was secured in triple layers and the patient returned to bed. During the four hours subsequent to the operation there were marked signs of shock, but no pain; convalescence was astonishingly rapid. The spleen weighed eighteen ounces; a splenculus occupied the hilus. Histologically it appeared normal.



The future course of these patients will be watched with great care, but I do not apprehend any evil results. More than three years ago I removed a wandering spleen from a woman twenty-two years of age; she is at the present time in good health, notwithstanding an attack of pleurisy six months ago. I have performed splenectomy four times, and in each case with a satisfactory result. In the early part of this year two other patients were placed under my care for the purpose of splenectomy, but I did not consider them suitable cases for so formidable an operation, for I am convinced that in order to meet with success in splenectomy it is necessary to very carefully select the cases.

Queen Anne-street, W.

THE PATHOLOGICAL CHANGES OF THE LABYRINTH.[1]

BY PROFESSOR POLITZER
(OF VIENNA).

IN seeking an explanation of the various troubles and defects of hearing it is requisite to trace out their causes or, in other words, to ascertain the pathological lesions that occasion them. This paper will, therefore, be devoted to: (1) a review of all the investigations upon these lesions in the labyrinth that have been made by many eminent observers; and (2) a statement of personal observations from my own studies in the field of pathological anatomy extending over many years.

Our knowledge of the pathological changes of the labyrinth barely extends beyond the second half of this century. The reason for this scientific hiatus depends mainly upon the imperfection of methods of microscopic examination, which were only successfully remedied about the period indicated, as witnessed by the discovery then made by the illustrious Italian Professor Corti of the histological structure of the cochlea, and the very striking and well-known researches subsequently undertaken by Böttcher, Moos, Steinbrügge, Habermann, and others. Nevertheless, many difficulties still exist, such as the impossibility of making post-mortem examinations at once, the meagreness of proofs of labyrinthine affections during life—conditions which hitherto have not enabled us to go beyond the gross anatomical facts of

[1] An address delivered at the Fifth International Congress of Otology, held at Florence from Sept. 23rd to 26th, 1895.

labyrinthine pathology. The knowledge so acquired will not have its full value until we have succeeded in connecting it with the clinical phenomena produced by these anatomo-pathological states. Unfortunately, as yet there are only a few isolated instances in which anatomical facts have been connected with clinical observations made during life. The various pathological changes in the labyrinth comprise (1) hyperæmia; (2) hæmorrhagic extravasations into the labyrinth; and lastly (3) inflammations of the labyrinth, primary as well as secondary.

1. *Hyperæmia.*—Easy of recognition anatomically, hyperæmia is of special importance clinically, since it may give rise to subjective noises in the ears, vertigo, and disturbances of hearing. The highly interesting and exhaustive researches made by Dr. Eichler in Professor Ludwig's laboratory at Leipzig upon the vascular system of the labyrinth established the fact that the labyrinth is provided with a special system of vessels, of which the arterioles arise from the internal auditory artery and penetrate through many ramifications into the different parts of the labyrinth, where they break up into capillaries in the cochlea, the vestibule, and semicircular canals, and thence pass into venous capillaries which find an outlet into the venous system of the brain. This special labyrinthine vascular system has numerous anastomotic connexions with neighbouring parts, notably with the tympanic cavity. I was the first to ascertain, by means of microscopic sections treated with osmic acid, that the vessels of the mucosa of the tympanum pierce the bony part of the promontory and anastomose with the vessels of the lining membrane of the labyrinth—an anatomical fact confirmed in the course of pathological investigations. The secondary hyperæmia here meant is particularly that produced by various infective states, notably typhus fever and diphtheritic scarlet fever. But another common cause of hyperæmia is to be found in certain obstacles to the reflux of the venous blood of the labyrinth towards the cranial cavity, such as cerebral tumours and the pressure they exert on the cerebral veins, particularly tumours of the base of the skull growing into the internal auditory meatus and thus compressing both the internal artery and vein. States of labyrinthine hyperæmia are also due to the influence of sympathetic nerve action; the symptoms by which they are indicated—a rapid colouration followed by an equally rapid pallor of face, of external meatus, and of tympanum, tinnitus, and vertigo—admit of no doubt in this regard. There are some forms of hyperæmia which are merely transitory, supervening on acute inflammation of the tympanum or dependent on nervous influence, and which are not then followed by functional derangements. But permanent hyperæmia, caused by chronic inflammation of the tympanum or by arrest of circulation, gives rise to various disorders and persistent troubles. The changes resulting therefrom are enlargement of vessels, pigmentary exudation, and thickening of the membranous parts of the labyrinth and of its lining. This subject will again be referred to.

2. *Hæmorrhagic extravasations.*—Hyperæmia often eventuates in extravasations into the labyrinth, but the latter may be also produced apart from pre-existing congestion. They often occur in infectious diseases, as typhus fever, scarlet fever, diphtheria, small-pox, tuberculosis, chronic nephritis, diabetes, leukæmia, &c., as well as in disorders of circulation due to organic lesions of heart or lungs. In the last-named cases the hæmorrhages must be ascribed to defective circulation, whilst in infectious diseases they are due to changes induced by the action of the specific microbes, which cause diminution of the resistance of the vessel walls. In every case these extravasations take the form of circumscribed hæmorrhages or more extensive effusions of blood in different parts of the labyrinthine cavity. As Knapp and myself have ascertained from post-mortem examinations, these hæmorrhages are met with more commonly than is generally believed in chronic suppurations of the tympanum, especially in those which are complicated with caries, and their frequent presence demonstrates how numerous must be the anastomoses between the vessels of the tympanum and those of the labyrinth. The most interesting forms found by Moos, Steinbrügge, and myself in cases of hæmorrhagic perimeningitis, and of hæmatoma of the dura mater, and also in tuberculous meningitis, are found in part along the course of vessels or nerves and in part between the lamellæ of the bony spiral lamina and in the spiral ganglion, besides hæmorrhagic effusions in the trunk of the acoustic nerve and the formation of thrombi in the external auditory artery.

The labyrinthine hæmorrhages which go by the name of "Ménière's disease" are confined to a single case examined post mortem by this observer; it was the case of a young girl who suffered during life with attacks of vertigo, nausea, and disturbance of coördination; but as no other parallel case has been since observed the anatomical basis of Ménière's disease is still lacking, and we ought not, therefore, to speak of a Ménière's "disease," but only of Ménière's "group of cerebral symptoms," which he was, however, the first to correlate with labyrinthine affections from the clinical point of view. It has not been demonstrated as yet that the labyrinthine symptoms frequently observed after the use of certain drugs, such as quinine and salicylic acid, &c., can be produced by hæmorrhages in the labyrinth; in this matter we have only presumptive evidence based on experiments on rabbits made by Fentner. Just as is the case with hyperæmia of long duration, so also do blood extravasations frequently produce pigmentary exudations in the labyrinth; hæmoglobin is then deposited on the membranous parts quite as much as on the walls of the labyrinth, in the form of irregular brown or blackish patches firmly adherent to the tissues of the organ. These pigmentary deposits no doubt irritate the extremities of the auditory nerve and consequently produce subjective tinnitus.

3. *Inflammations of the labyrinth.*—These are either primary or secondary; their pathological relations are more fully known than are those of the changes previously described. Yet in regard to primary forms of inflammation we know little except as to their issues, but not the changes which occur during their early stages. The pathological changes of secondary inflammations, concerning which we possess more precise ideas, result either from acute or chronic infectious diseases, or from a similar inflammation in the cavity of the tympanum. Other writers besides myself have been able to determine that the most marked of these changes are *especially manifested in the lower parts of the cochlea*, whilst the upper parts of this organ are found to be comparatively slightly affected. We are driven to hypothetical reasons to account for this state of things. The most probable is that of Steinbrügge, who thinks that an inflammation, spreading from the cranial cavity to the labyrinth along the nerve ramifications to the cochlea, first reaches the lower plane of this structure, just as in cases of cerebro-spinal meningitis where these lesions are at the very first manifested in the lower parts of the scala tympani of the cochlea. The first case of primary inflammation of the labyrinth to be described was brought by me before the Milan Congress. It was the case of a lad aged thirteen who had been deaf and dumb from the age of two and a half years owing to a labyrinthine otitis, and one could see in the preparation by aid of a lens the complete invasion of the labyrinth by osseous tissue, and the ossified cochlea, the outlines of which are clearly distinguished from the bone that surrounds it. The anatomical changes produced from infectious diseases arise from the invasion of the labyrinth by specific microbes or by purulent material. From these invasions there results an inflammation of the investment and membranous parts of the labyrinth, which leads either to destruction of tissue or to a proliferation of connective tissue that may fill the cavities of the organ entirely or partially and terminate in ossification. These changes are apparently more or less intense according to the more or less advanced degree of inflammation; slight thickenings (*gonflements*) of the labyrinthine lining, or else numerous filaments extend between the bony walls and membranous parts up to the point of completely filling all the cavities with osseous tissue. We owe to Moos the description of the anatomical changes that supervene on infectious diseases, such as scarlet fever, diphtheria, and measles, by the invasion of specific micro-organisms that takes place into the labyrinth through the lymphatic channels passing from the tympanum to this organ. The action of these micro-organisms results in the formation of connective tissues which subsequently ossify, besides necrosis with degeneration of such tissues, caused either by thrombosis of capillary vessels or by the direct action of the virus on the tissues themselves. The character of the grave changes thus produced is in general, except for a few modifications, the same as is found after *diphtheria*, which was the first to be specially studied by Moos. Although he did not happen to determine the presence of the specific microbe of diphtheria, he established in every case the fact of a secondary infection by streptococci, which he detected in nearly all the tissues—in the

endo- and peri-lymphatic spaces just as freely as in the vestibular aqueduct, in the ramifications of the acoustic nerve, and in the bony cavities of the petrosa itself. The destructive changes occasioned by this invasion are the same as those just mentioned, and we cannot wonder at their extent knowing how destructive are the effects of the presence of streptococci *en masse*. The results of the infective labyrinthine affections developed during or after *measles* are very similar; they are also described by Moos, who attributes the destructive changes in the labyrinth ensuing on this disease to the same cause—viz., streptococcic invasion of the organ. The disintegrating action of this microbe is shown in fatty degeneration of the endothelia of the bloodvessels, leading to coagulation, thrombosis, and vascular engorgement, followed by colloid changes of the labyrinthine tissues, and other destructive lesions in the periosteum, the osseous parts of the cochlea, and the ramifications of the auditory nerve.

The changes following upon *cerebro-spinal meningitis* were studied by Heller, who was the first to prove that the deafness resulting from this affection was due to suppurative inflammation of the labyrinth. The aqueduct of this organ is the route for this invasion, which particularly involves the cochlea, this being in direct communication with the cerebro-spinal space, where the exudation is seated. These changes mainly consist in destruction and atrophy of the membranous parts of the labyrinth and of the ramifications of the auditory nerve, in partial or complete distortion of the organ of Corti, in atrophy of the cells of the spiral ganglion, and in the deposit of amorphous detritus mingled with a few cells; lastly, forming the remnant of the original inflammation, there is a new formation of connective tissue, which may undergo partial calcification. I myself have ascertained the frequency with which secondary affections ensue on chronic suppuration in the middle ear, which may occur either after the destruction of the labyrinthine fenestra by the spread of inflammation to the membranous parts of the labyrinth, or actually without any apparent lesion of the labyrinthine wall by the extension of the morbid process through bloodvessels and lymphatics by means of the anastomosis which exists between those of the tympanic cavity and of the labyrinth. As regards the first variety of these affections I may recall a case which I described at the Brussels Congress, in which the base of the stapes had been destroyed by granulations of connective tissue following suppuration, their growth extending nearly into the vestibule of the labyrinth, as shown in the preparation I exhibited. Subsequently I showed the second variety of these secondary inflammations in another preparation obtained from a deaf woman ninety-three years of age, in whom the external auditory meatus was filled with cholesteatomatous masses formed after suppuration. In the first preparation the outer wall of the vestibule of the labyrinth was found to be coated with tuberculous epithelioid granulations, which were also distributed over the lateral wall and the base of the utricle. In both cases marked labyrinthine symptoms were entirely absent. I have, moreover, discovered in a certain number of cases of chronic suppuration the residues of chronic inflammation in the cochlea in the form of proliferation of connective tissue with simultaneous partial ossification of this tissue, a change which is more frequently seated in the scala tympani. Another variety of exudation into the labyrinth (hitherto little known and first pointed out by me) is that which is brought about by the presence of some obstruction in the internal auditory meatus, causing compression of its bloodvessels, and thus producing exudation as the result of blood-stasis. I may cite as a conclusive instance on this point an observation I made in a woman aged sixty-three years, who was attacked with deafness of the left ear in the course of a cancerous affection of the side of the neck, where the disease had penetrated into the cranial cavity through the base of the skull. The malignant growth had advanced towards the left petrous bone, surrounding and compressing the carotid artery and jugular vein, and then sprouting into the interior of the internal auditory meatus. The exudation, which consisted of a mass of granular material, was in part situated on the cochlear lining and in part on the lamina spiralis. There was no appreciable change in the tympanic cavity and Eustachian tube.

The labyrinth may also be affected in cases of *leukæmia*, and pathological changes may then ensue in this organ which lead to total deafness. The first demonstration of this fact was made by me at the Brussels Congress in the case of a young man thirty-two years old who had long since been attacked with suppurative otitis media, and who had become deaf one year before his death. The preparations obtained from this case showed: (1) new formation of connective and osseous tissue in the scala tympani of the cochlea; (2) complete invasion of the semicircular canals by connective tissue; and (3) accumulation of lymphoid cells in these canals, in the vestibule, and the scala vestibuli of the cochlea. A similar case has been recorded by Gradenigo, who found extravasations of blood in the mucosa of the tympanic cavity, which had been previously attacked with suppurative inflammation, but no like change in the labyrinth; and then another also by Steinbrügge, who detected changes closely parallel to those which I had pointed out in the case of a young man twenty-three years of age who died from splenic and myelogenic leukæmia, and had been previously attacked with syphilis—namely, adhesions in the tympanic cavity, thickening of the membrane of the fenestra rotunda, invasion of the cochlea by blood extravasations, and nearly total ossification of the semicircular canals.

Affections of the same nature are also produced in the labyrinth as the result of *syphilis*. In this regard the best-known examples hitherto recorded are cases of hyperostosis of the temporal bone with contraction of the labyrinthine cavities and of the internal auditory meatus produced by chronic syphilis, and also, as I have already pointed out, an overgrowth of the labyrinthine capsule with stenosis of the fenestra ovalis, ending in ankylosis of the stapes; and, further, a case of acute suppurative inflammation observed by Schwarze in a syphilitic woman who died from acute purulent meningitis. Among rare anatomical changes ensuing on syphilis I have also noted atrophy and destruction of ganglionic cells in the spiral ganglion and similar lesions of the auditory nerve fibres in the cochlea. The former I observed and described in the case of a man fifty years of age, who had been deaf and syphilitic for ten years; whilst the latter were ascertained by Moos and Steinbrügge. Further, I am reminded by an interesting observation made by Kirchner concerning the pathological changes of the bloodvessels of the labyrinth after syphilis in a patient the subject of tertiary syphilis, consisting in a small-celled infiltration of the coats of the vessels identical with that described by Heubner in the cerebral vessels of syphilitic subjects. The concomitants of these changes appear in the shape of fatty degeneration and pigmentation of endothelial cells, proliferation of connective tissue, and obliteration of the vessels here and there. These changes as a whole present similar characters to those proceeding from chronic inflammation above mentioned. Thus in two cases of syphilis Moos found thickening of the periosteum of the vestibule, hypertrophy of the connective tissue attaching the membranous to the bony parts of the labyrinth, and in one of the cases he ascertained the presence of calcareous concretions in the lining of the vestibule. Gradenigo has shown that this connective tissue may in the later stages become ossified, a change which he thought was attributable to hereditary syphilis in a young tuberculous girl aged fifteen years.

Another class of labyrinthine affections is that arising from *tuberculosis*, although primary tuberculous disease has not yet been found. Such observations as have been made on these rare conditions are confined to subjects in whom the middle ear was invaded by tuberculosis, which had encroached upon the labyrinthine cavity and capsule. The features of this affection are denoted by the inflammation, as soon as the capsule has been perforated by ulceration, extending over the lining of the cavity and the membranous parts of the labyrinth, thereby producing, on the one hand, necrosis of tissues, and, on the other, a proliferation of newly formed connective tissue which partially fills the labyrinthine cavities.

In the list of these pathological changes of the labyrinth must also be reckoned *primary affections of the labyrinthine capsule*, to which I drew attention at the Rome Congress. I then demonstrated that in a large number of cases regarded as dry chronic catarrh of the middle ear osseous growths of new formation are met with in the capsule around the fenestra ovalis, these proliferations extending in the direction of the fenestra and leading to ankylosis of the stapes or complete occlusion of the fenestra. In an advanced stage of the disease the bony overgrowth comes to penetrate into the cavity of the labyrinth, notably into the scala tympani, subsequently leading to complete disorganisation of the membranous parts of the labyrinth and organ of Corti.

Finally, I have placed among similar affections which

I have pointed out and described the *depression of Reissner's membrane*, resulting from increased extra-labyrinthine tension on the organ of Corti, as first referred to by Steinbrügge and later by myself and other writers, and I cited the case mentioned by Steinbrügge of a boy aged twelve years who died from a cerebral tumour, in which the increase of intra-cranial pressure was shown during life by the presence of optic neuritis, and another case described by Gomperz of a tuberculous subject who died from internal pachymeningitis and cerebral œdema, observing that in both cases the membrane of Reissner was found depressed to such an extent that only a mere slit existed between it and the membrane of Corti.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF PROLONGED LABOUR.

BY R. D. RUDOLF, M.B., C.M. EDIN.,
LATE RESIDENT PHYSICIAN TO THE ROYAL INFIRMARY AND ROYAL HOSPITAL FOR SICK CHILDREN, EDINBURGH.

ON April 4th, 1893, I was called to see, in consultation with a native medical man, a case of prolonged labour, which had only come under his notice that morning. The patient was a middle-aged Hindoo woman and a multipara. She had gone to full term. The history obtained from her relatives was that she had been in a state of labour for eight days, and that as the native midwives could not effect delivery they had brought her into the town of Sewan, a distance of thirteen miles. According to the apparently usual custom among the natives, she had been allowed neither food nor drink since labour began. The patient was found to be a well-nourished woman (although, according to her friends, she was much reduced) and rather above the average size. She lay on her back in a semi-conscious state, muttering occasionally to herself. The skin was cold and clammy, respiration hurried and shallow, and the pulse at the wrist scarcely to be felt and not countable. Auscultation over the heart showed that this organ was beating from 150 to 170 per minute. The tongue was dry and glazed. An intensely fetid discharge issued from the vagina. On examination per vaginam a face presentation with the chin towards the right sacro-iliac synchondrosis (first position) was made out low down in the vagina. The child had evidently been dead for some days. There was complete absence of pains, and the uterus appeared to be completely relaxed. On passing a catheter an enormous quantity of rather high-coloured clear urine came away. The native medical man had already attempted to apply a pair of short forceps without success. After some brandy had been given to the patient I adjusted a pair of Simpson's axis-traction forceps, and by easy stages, and without any great force being used, delivered the head, complete rotation forwards of the chin taking place. The patient became very collapsed, so a hypodermic injection of ether was given and the body was delivered without difficulty. The child was a large male and was very much decomposed, the face in particular being almost denuded of soft tissues. A drachm of extractum ergotæ liquidum was given by the mouth. In half an hour, no pains having appeared, I removed the placenta by introducing the hand into the uterine cavity. No hæmorrhage occurred, but a great deal of intensely fetid, reddish fluid came away. The uterus was then very thoroughly washed out with a corrosive sublimate solution (1 in 2000), and the external parts were cleansed with a strong solution of phenyle. Some milk and brandy were given and hot bottles placed around the patient. That evening (six hours later) the temperature was 97° F. and the collapse was still great, but the pulse was a shade stronger. Milk and brandy were given every half hour. Next morning the temperature had become normal and the pulse counted at the wrist was 115 to 120. The patient was much stronger and could talk sensibly. A douche of corrosive sublimate solution (1 in 3000) was used and the urine was drawn off with a catheter. That evening the temperature had risen to 100°, and five grains of quinine were given. Thence onwards the vagina was washed out twice daily with corrosive sublimate solution (1 in 3000) and the phenyle solution alternately. Fluid nourishment was continued at short intervals. On the second day the uterus was felt for the first time definitely contracted; on the third day the patient micturated and the bowels were moved naturally; and from that time forward she made an uninterrupted recovery and was sent home at her own request a week later. Several weeks afterwards she reported herself as quite recovered.

This case was undoubtedly one of uterine inertia in a previously healthy woman, and this state was brought on by the non-rotation forwards of the chin along with a distended bladder. It seems worthy of note on account of the complete recovery of the patient after such a prolonged labour, such extreme sepsis, and such great prostration. Also it is perhaps an interesting record of a far advanced stage of inertion such as would seldom or never be seen in a country such as England, where proper medical attendance would be sure to be availed of long before this state was reached.

Sewan, Sarun, Bengal.

THREE CASES OF CANCER OF THE GASTRO-INTESTINAL TRACT DEVELOPING DURING PREGNANCY.

BY JAMES OLIVER, M.D., F.R.S. EDIN.,
PHYSICIAN TO THE HOSPITAL FOR WOMEN, SOHO-SQUARE, LONDON.

WHEN the stomach becomes infected by cancer during pregnancy the resulting sickness is apt to be attributed to the molecular variations going on in the uterus. If, however, a patient who has borne two or more children and who has never experienced sickness during pregnancy complains of this symptom, and it is evident that the cause is neither uterine nor renal, then we should suspect organic disease of the stomach. In the ordinary course of events sickness, as I have elsewhere[1] remarked, is seldom observed during pregnancy when the tone of the uterus is more or less impaired.

CASE 1. *Cancer of the pylorus; sickness noted from the sixth week of pregnancy.*—The patient was a woman aged forty, who had been married five years and had had three children. The last child was born on March 2nd. At the time when the patient considered herself to have been pregnant for six weeks she began to complain of sickness, a symptom which she had complained of during the early months of her first pregnancy, but which was absent during her second. As the sickness persisted after the third confinement the patient presented herself at the hospital, and on examination I detected a small cake-like, movable, and slightly tender mass close to the umbilicus. Death occurred after the disease had probably been in existence about two years.

CASE 2. *Primary cancer of the stomach and secondary of the pelvic peritoneum; sickness noted from the seventh month of pregnancy.*—This patient, aged thirty, who had been married eight years and had had four children, was seen by me in consultation with Dr. H. P. Miller of Stoke Newington-road. Her last child was born on Aug. 26th. About the seventh month of pregnancy she began to complain of sickness, a symptom which she had never complained of during her former pregnancies. As the sickness persisted after parturition, and pain was experienced in the lower abdomen, Dr. Miller desired me to see the patient. The abdomen was slightly prominent in consequence of the inflation of the bowel, and with difficulty a small, hard, and nodular swelling was detected to the right of and above the umbilicus. Behind the uterus was felt a hard mass with a keel-like ridge, which pushed down the vaginal roof. The pelvic mass was not tender. Death occurred five months after the fourth confinement.

CASE 3. *Cancer of the sigmoid flexure developing during pregnancy.*—The patient was a woman aged twenty, who had been married eighteen months, and had had one child. The child was born two months before the patient came under my observation. Ever since the confinement a small swelling had been observed in the left half of the abdomen. The following were the physical signs. In the left iliac region, about one inch to the inner side of the superior spine of the ilium and extending from its level upwards for three

[1] Diseases Peculiar to Women, p. 24.

inches, was a small, annular, hard, and fixed swelling, which was tender to the touch. The cervix uteri was central and the body of the uterus was felt in front lying on the pelvic floor. There was no deposit in the pelvis. Death occurred five months after parturition.

Gordon-square, W.C.

A CASE OF EMPYEMA OF THE ANTRUM OF HIGHMORE OF SEVEN YEARS' DURATION.

BY GEORGE PINDER, M.D., B.C. CANTAB.,
LATE ASSISTANT HOUSE PHYSICIAN, GENERAL HOSPITAL, NOTTINGHAM.

A MAN aged thirty-four years sought advice for constant pain referred to the left temporal, mastoid, and occipital regions; he complained also of more or less constant nausea and of palpitation of the heart. A careful physical examination failed to elicit any positive evidence of organic disease, and inquiry was then directed towards a purulent discharge from the left nostril disregarded by the patient, since he had had it for quite seven years and "had got used to it." He explained that the discharge was due to an attack of influenza seven years previously, and that his club attendant had told him that "there was a piece of dead bone in his nose." On rhinoscopic examination the anterior portions of the septum and of the left inferior turbinal bone were seen to be studded with numerous small sessile vascular polypi, and pus was observed oozing from the situation of the middle meatus. The purulent discharge was constant and offensive; it varied much in amount and was not affected by the position of the head, save that at bedtime it "ran down the back of the throat." The left upper molars were carious but not painful. There was tenderness on pressure over the situation of the left infra-orbital nerve. Under ether the decayed teeth were extracted, and, in view of the long-standing nature of the case, two holes were drilled into the antrum, one in the situation of the second molar and the other through the canine fossa. A pyogenic membrane, forming a very complete cast of the antral cavity, was removed by syringing with an antiseptic solution, together with a quantity of pus and caseous material. The polypi were removed and their bases cauterised. The troublesome symptoms ceased almost immediately, and the patient is now, after some ten weeks' treatment, perfectly well. The only remarkable feature of the case, and its best apology for publication, is the extraordinary length of time the disease had existed unrecognised, the patient having been under almost constant medical care since the first appearance of the nasal discharge. It emphasises once more the importance of thorough intra-nasal examination in all cases of purulent nasal discharge.

Ramsey, Isle of Man.

ST. MARY'S HOSPITAL MEDICAL SCHOOL — REVISED LIST.—*University Scholarships:* R. R. Wade, B.A., of Exeter College, Oxon., £52 10*s.*; G. S. Keeling, B.A., Caius College, Cambridge, £52 10*s.*; A. Ferguson MacCallan, B.A., Christ's College, Cambridge, Exhibition of £26 5*s.* *Natural Science Scholarships:* W. H. Willcox, B.Sc., £105; E. W. Holyoak, £52 10*s.*; A. F. Hayden, £52 10*s.*; J. Tattersall, £52 10*s.*

THE NEW ASYLUM FOR WEST SUSSEX.—The violent opposition to the county council's scheme for erecting a new lunatic asylum for the administrative district of West Sussex has not been heard of lately, and meanwhile the new building is getting on apace. It stands about a mile from Chichester, and is built from the design of Sir Arthur Blomfield. The executive buildings stand in a block in the centre of a series of six blocks for the reception of the patients; the latter blocks are to be connected by underground corridors. The chapel is to cost £4000 out of £114,669, the amount of the contract. The total expenses will probably be nearer £200,000, but the original estimate was far in excess even of this figure. Water has been found at a depth of 400 ft., and a huge water tower some 100 ft. in height will serve the buildings. The asylum will accommodate 450 patients, and is capable of being extended to receive another 150. Up to the present time the asylum at Hayward's Heath, in East Sussex, has been the only one in the district, but for years patients have had to be drafted thence to Berrywood, Salisbury, and establishments at other places.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

MIDDLESEX HOSPITAL.

TWO CASES OF INGUINAL HERNIA PRESENTING UNUSUAL CHARACTERS.

(Under the care of Mr. HENRY MORRIS.)

THE rarity of the first of these cases is shown by the fact that the condition is not described in our text-books or in the special treatises on hernia to which we have been able to refer. Mr. William Anderson has described[1] a similar condition met with by him in three cases where he operated for left inguinal hernia. He speaks of it as "an anatomical variation which has not hitherto been recognised (except as a possibility by Joseph Maclure in his Surgical Anatomy) the absence of a sigmoid meso-colon in the iliac segment of the large intestine." He apparently apprehended some loss of vitality in the portion of bowel which he dissected up and returned, owing to the movement from its attachments, but all three cases recovered satisfactorily. The second case is also an unusual one, for although it is not uncommon to meet with ulceration of the bowel in a case of strangulated hernia, the destruction of tissue occurs at the

FIG. 1.

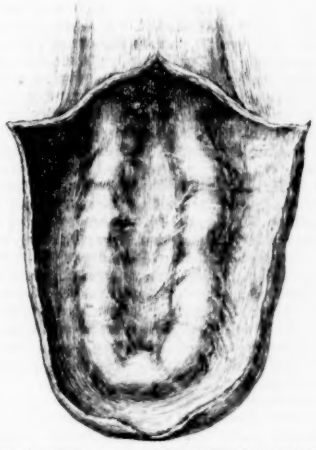


Diagram showing sac open and bowel behind posterior wall of sac—indeed, forming posterior wall of sac.

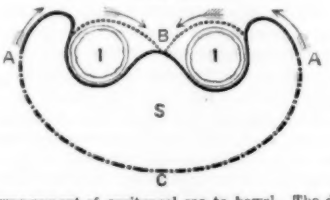
point of strangulation, usually the neck of the sac. Here the ulceration occurred at the fundus of the sac; and the escape of the contents of the intestine was limited by adhesions before the perforation was complete. The resection of the bowel was undertaken under favourable circumstances compared with most cases of operation for ulceration with perforation, the patient being in a condition to permit a prolonged operation and therefore of all necessary care in the suturing. It will be noticed that Mr. Morris resorted to the method of uniting the ends as the most reliable when he had the choice, and did not resort to the use of any of the artificial aids which are recommended by some surgeons. For the notes of the cases we are indebted to Mr. John Murray, surgical registrar.

CASE 1. *Hernia of the sigmoid flexure into the scrotum; part of the sac used to give a complete covering of peritoneum to the bowel, the rest excised; inguinal canal closed*

[1] Medical Press and Circular, 1894, vol. ii., p. 621.

by sutures; radical cure.—A man aged twenty-seven years was admitted to the Middlesex Hospital on Feb. 20th, 1893. He stated that he had had a swelling in his left inguinal region for six years, but he was unable to give a definite history as to its first appearance. On examination there was a large inguino-scrotal hernia on the left side, the greater part of which was reducible; the external ring was very patulous. On March 11th, under an anæsthetic, the sac was opened and found to be empty, and behind its posterior wall was a loop of the sigmoid flexure (Fig. 1) with its meso-sigmoid and appendices epiploicæ. The meso-sigmoid blended with the posterior part of the wall of the sac. The sac having been laid open, as shown in Fig. 1, was then dissected, together with the bowel, free of the connective tissue outside it; it was then divided near the bowel, as shown in Fig. 2

FIG. 2.



Shows arrangement of peritoneal sac to bowel. The dotted lines indicate the part of the sac entirely removed. The arrows pass from A, where the sac was cut away, to B, where the cut edge of the remainder of the sac was sutured round the gut.

at A, on each side, and the peritoneum was stitched back, as indicated by the arrows, to the point at B. The bowel thus isolated, and completely enveloped in peritoneum was returned into the abdomen, the rest of the sac was dissected up and ligatured at the neck, and excised; the inguinal canal was closed by three kangaroo-tendon sutures, which also transfixed the ligatured neck of the sac. A counter-opening was made in the lower part of the scrotum, and a drainage-tube was inserted. The superficial wound was sutured and dry dressings were applied. There was some slight suppuration at the lower part of the wound, and an abscess formed, which was opened. After this the wound healed soundly, and the patient was discharged well on May 10th.

Remarks by Mr. MORRIS.—I wish to draw attention, firstly, to the method adopted for freeing the bowel from the sac and utilising part of the sac to form a covering of peritoneum over the surface of the gut which was between the reflected surfaces of the meso-sigmoid; secondly, to the extreme rarity of the sigmoid flexure forming a hernial swelling. I have had to operate upon three or four cases in which the cæcum has formed a hernial swelling, and in which this portion of the gut had the same bearing to the sac as in this case; but I have never before, to my recollection, treated or seen a case like the present, in which the sigmoid flexure was the part of the bowel involved.

CASE 2. *Irreducible inguinal hernia; resection of intestine; castration; recovery.*—The patient, a healthy-looking man aged forty-three years, was admitted to the Middlesex Hospital on May 15th, 1894, with an irreducible inguinal hernia. He stated that he had had a rupture on the left side for twenty years and had been ordered a truss, which he had worn constantly. About five years previous to his admission—namely, in 1889—he noticed a swelling in the right groin, which gradually increased in size and descended into the scrotum. At first he could put it back, but for the last three years it had been irreducible. He had noticed a hard lump in the scrotum for some considerable time, but was unable to state definitely how long it had been present. At the time of his admission there was an inguino-scrotal hernia on the right side; it was partially reducible and resonant over the upper two-thirds, apparently consisting almost entirely of intestine. The skin of the scrotum was red and œdematous, and at the lower part of the hernial swelling, and obviously connected with it, there was a hard, tender, somewhat globular mass about the size of a tennis-ball. It was smooth on the surface and not adherent to the skin. On May 22nd an incision was made over the external abdominal ring; the hernial sac was exposed, the lower part of which was found to be incorporated with the hard mass above described. The sac was opened; it contained a loop of small intestine which was firmly adherent to the bottom of the sac. The adhesions were carefully separated, during which process some purulent fluid and also some fæcal matter from a small perforation in the intestine escaped. The wall of the bowel at the point of attachment was softened and ulcerated, and beyond this, for a distance of two inches on either side, it was ulcerated, infiltrated, and thickened, and had all the naked-eye appearances of an epithelioma of the gut. The loop of intestine was drawn down, and, sponges having been carefully packed all round, clamps were applied above and below the affected area, which was cut away together with a V-shaped piece of the mesentery. The cut edges of each layer of the mesentery were separately sutured with fine carbolised silk, and the ends of the intestine were then united by means of Lembert's sutures. After the bowel had been returned into the abdominal cavity an attempt was made to separate the sac and the mass connected with it from the testicle; this, however, proved to be impossible. Accordingly, the neck of the sac and the cord were separately ligatured and divided, the sac and the testicle being removed together. The wound was closed, a drainage-tube was inserted, and dry dressings were applied. The patient was very faint after the operation, which lasted two hours, but he soon rallied. Nothing was given by the mouth for the first twenty-four hours, after which a teaspoonful of milk every hour was ordered. On May 23rd the temperature was 100·6° F. and the pulse 104; he was very comfortable and free from pain. On the 24th the wound was dressed, and as there seemed to be some tension at the upper part two stitches were removed. The temperature gradually came down and on the 27th was 98·4°. His bowels acted naturally on the 28th, and on June 4th he was ordered solid food for the first time. Some slight suppuration occurred in the upper part of the wound, which delayed his convalescence, but the wound was soundly healed on June 29th, and he was sent to a convalescent home on July 3rd. The excised portion of intestine measured seven inches and was bent on itself so as to form a U the limbs of which were firmly adherent to each other. At the point of attachment, which was situated half an inch above the bend, there was an oval ulcerated area measuring two inches by one inch, in the centre of which there was a perforation opening into the upper part of the bowel large enough to admit a No. 2 catheter. On laying open the intestine the mucous membrane was perfectly healthy except at one spot where the perforation had occurred. The hernial sac was extremely thick, and attached to the lower part there was a hard indurated mass. In the centre of this there was a small cavity containing pus with a distinctly fæcal odour. This cavity communicated with the interior of the sac by a small opening.

ROYAL BERKSHIRE HOSPITAL, READING.

TWO CASES OF PERFORATED GASTRIC ULCER TREATED BY OPERATION; ONE RECOVERY.

(Under the care of Mr. WILLIAM J. MAURICE.)

THESE cases are very good examples of the symptoms produced by the perforation of a gastric ulcer and the method of operation which is required in order to save life when such an occurrence has taken place. There are one or two points in the treatment which these cases serve to emphasise: one is the great importance of early operation, and the other the inadvisability of giving opium, which serves to mask symptoms and produces an apparent improvement which may cause delay in operating. Mr. Maurice gives rather a high estimate of the cases of gastric ulcer which prove fatal by perforation, unless this disease is unusually prevalent in and around Reading. If the number of deaths from this cause was as large in proportion in other parts as it appears to have been there within the past twelvemonth, the profession would consider the question of operation before perforation much more seriously than it does at present. We congratulate Mr. Maurice on his success in the first of these cases.

CASE 1.—A young woman aged nineteen years was seized with sudden acute pain in the left hypochondrium and between the scapulæ at 3 P.M. on Feb. 15th, 1895. She was seen by Mr. A. C. Major, who diagnosed perforation of a gastric ulcer and sent her to the hospital, where she was received at 10.45 P.M. She was a rather anæmic girl, with a history of pain after food for some time past. She lay on her back with an anxious expression; her breathing was rather rapid

and shallow; the pulse was 138, inclined to intermit, but of fair volume; and the temperature was 101·6° F. She had vomited, but was not collapsed. The abdominal wall was rigid, and liver dulness was absent. She was seen at midnight by Mr. W. J. Maurice, when her condition was not much changed, though she was stated to be looking distinctly worse. Under chloroform, nine hours after the first onset of symptoms, a three and a half inch incision was made in the middle line above the umbilicus down to the peritoneum, which bulged into the wound; gas escaped at once on the peritoneum being opened. The stomach was drawn out of the abdomen, and a small perforation was readily found on the anterior surface, near the cardiac end, and was secured by two rows of Lembert's sutures. The peritoneum was flushed with water at 110°, a good deal of lymph was removed with sponges, and the wound was closed. The stomach was then partially washed out, and one-sixth of a grain of morphia was injected hypodermically. The patient had a good night. She was fed by nutrient enemata at first, mouth feeding being begun on Feb. 18th, when also the bowels were opened by an enema of olive oil. From this time the progress was satisfactory, although the temperature did not become quite normal for nearly three weeks; there was also some suppuration of a rather superficial character. On March 1st she was suffering from thrombosis of the left saphena vein, which lasted for about ten days. She was put on a fish diet on March 15th and soon got strong and well. She was, however, detained in hospital till April 30th, waiting for admission to a convalescent home.

CASE 2.—A woman aged thirty years was seen in private by Mr. W. J. Maurice at 9 P.M. on March 2nd, 1895. She had been seized shortly before with sudden acute pain in the epigastrium, and more especially between the scapulæ, and had vomited. There was little or no tenderness; the abdominal muscles moved well; the temperature was 98·4° F.; the pulse was weak and rapid; and the liver dulness was normal. She preferred to lie on her left side with the legs fully extended. She was known to have suffered severely from gastric ulcer ten years before, and had been under treatment for dyspepsia recently from time to time. Perforation of a gastric ulcer was at once suspected. She was given one grain of opium pill and was seen again at 10.30 P.M. By this time, though she was still in pain, her pulse was slower and stronger, she had not vomited, and was quite warm. In the belief that she was really better, and that, after all, perforation had not actually occurred, a small injection of morphia was given, and she was left for the night. Next morning it was found that she had changed for the worse in every way. She had not slept, her pulse was very weak and rapid, and her abdomen was beginning to be distended. Unfortunately, from various circumstances, it was impossible to remove her to the hospital till the afternoon. At 4.30 P.M. (nineteen and a half hours after perforation) she was placed under chloroform; the abdominal muscles then moved well; liver dulness was present, but was somewhat diminished. The physical signs, in fact, were but slight. An incision was made in the middle line above the umbilicus; the peritoneum did not bulge, and no gas at first escaped on opening it. A coil of reddened, lymph-covered intestine was seen to be adherent to the stomach. An attempt was made to draw the stomach out of the wound, but it was found to be bound down by old adhesions; a large, thick-edged aperture was, however, discovered, from which food and gas escaped. It was hard to make out its exact anatomical situation, but it seemed to be on the lesser curvature midway between the cardiac and pyloric orifices; above and behind it there was what was taken to be the pancreas, with the gastro-hepatic omentum intervening; the pylorus was displaced downwards. The perforation was extremely hard to reach owing to the matting together of intestines round it; but it was eventually closed fairly satisfactorily with two rows of fine silk sutures, the second row being placed at right angles to the first. The peritoneum was flushed and sponged, and the wound was closed. The operation lasted one hour and a half. The patient had a very restless night, with much hiccough and coffee-ground vomiting. The whole of the next day she was as bad as she could be; the pulse was very feeble and running, and there was a good deal of abdominal distension. On the morning of March 5th she was better after a fair night; the bowels acted very freely and continued to do so constantly till the following day, when she had distinctly improved; there was less distension, the pulse and breathing were quieter, and she no longer passed motions under her. Feeding by the mouth was begun on March 7th, and all went well, with daily improvement, until 3 A.M. on March 11th, when she had a severe attack of vomiting. The pulse again became feeble and rapid, and in the evening she was drowsy and restless, with dusky appearance, though there was no further vomiting. She was given three grains of calomel and one grain of opium. The next two days were marked by increasing weakness with rapidity of pulse, but there was no pain or vomiting, and she rested and took nourishment fairly well. At 9 A.M. on the 14th, while her bed was being put straight, she was seized with sudden pallor and laboured breathing and died in half an hour, unexpectedly.

Necropsy.—The body was fairly nourished. The operation wound was four inches long in the middle line above the umbilicus; from it a small amount of blood-stained purulent fluid escaped. The abdominal wall around the wound was infiltrated with pus; just beneath the wound there was a collection of thick pus shut off from the general peritoneal cavity by adhesions between the small intestine and the abdominal parietes. The small intestines were darkly coloured, empty, and bound down everywhere by recent adhesions. There were occasional patches of lymph, but there was no pus in the general peritoneal cavity. The stomach was greatly dilated, hour-glass in shape, and full of dark, foul-smelling fluid. The lumen at the centre of constriction would only admit the forefinger with difficulty, but at the upper margin of this, just in front of the attachment of the lesser omentum, there was a large ulcer the size of a shilling, with thick, rounded edges. The stomach was adherent to the pancreas behind. So far as could be ascertained, the sutures had held securely. Some scar tissue was found stretching from the edge of the ulcer towards the pylorus. Near the cardiac end of the stomach there were numerous submucous hæmorrhages. The kidneys, spleen, liver, heart, and lungs were examined and found to be normal.

Remarks by MR. MAURICE.—Perforation of a gastric ulcer is, here at any rate, a far more common affection than is generally supposed. I myself know of at least ten cases which have occurred in Reading within about twelve months. Of these ten cases seven have been operated upon, with three recoveries. Of my own three cases of operation one lived over a week,[1] a second lived nearly a fortnight, and a third recovered; both the fatal cases at one time promised to do well. A comparison of my cases leads me to attach most importance to the following points: 1. Early operation, which means prompt and accurate diagnosis. A single grain of opium may almost completely mask the symptoms. 2. The age of the patient and the degree of collapse. 3. The previous history; long-standing ulcer means matting of parts and also impaired nutrition. 4. The situation of the ulcer; most perforating ulcers are on the anterior wall, but near the lesser curvature they may be hard to get at. 5. A large perforation is more difficult to close than a small one, but more depends upon the extent of the ulcer and the condition of the surrounding tissues. Excision seems to be unnecessary, and would be quite impossible in a really difficult case. 6. Extensive escape of stomach contents, which means much shock at the time and probably extensive peritonitis afterwards. It is a singular fact that in my successful case, as in that of Mr. Walters and some others, recovery was delayed by thrombosis of the left saphena vein.

[1] Vide THE LANCET, June 2nd, 1894.

A FRENCH CONVALESCENT HOME AT BRIGHTON.—A convalescent home at Brighton in connexion with the French Hospital in London is in course of construction at the far end of the parade in Kemp Town. It is expected to be ready for occupation in about a year, and will contain about thirty beds for patients recovering from illness, as well as a certain amount of accommodation for infirm and aged persons. Baron de Courcel, the French Ambassador, laid the foundation-stone on Oct. 5th in presence of a distinguished company of French ladies and gentlemen. Sir William MacCormac, consulting surgeon to the French Hospital, also attended, and Dr. Achille Vintras, senior physician to the hospital, in returning thanks to the Ambassador after the ceremony, remarked on the benefits derived by convalescents from residence at the seaside.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

General Meeting.—President's Address.—Radical Cure of Hydrocele.

A GENERAL meeting of this society was held on Oct. 14th, the out-going President, Sir WILLIAM DALBY, being in the chair.

The report of the council was read; it showed the society to be in a flourishing condition. The vacancy in the office of treasurer caused by the decease of Mr. Durham was filled by the election of Mr. Goodsall. Votes of thanks to the President and to the retiring officers concluded the business of the general meeting.

Sir JAMES CRICHTON BROWNE, the incoming President, on taking the chair, thanked the Fellows for the honour they had done him in electing him to fill the office of President. He then delivered his inaugural address, taking for his subject the Generalisation of Specialism. The subject was handled by the President in his usual able fashion; it was rich in original thought, and an attempt to render its substance in abstract form would not do it justice. The following must therefore be considered as merely an indication of the leading topics dealt with. He alluded to the fact that the Medical Society had during the last few years included among its presidents representatives of several of the great specialities into which the profession in its ever-growing heterogeneity tended to divide. He thought this liberal spirit which characterised the policy of this most conservative of medical societies was one of its most admirable features, for it prevented that insulating of the specialities which was a danger both ethically and scientifically, and the impoverishment of professional thought which the withdrawal from its consideration of novel and minute observations must entail. He pointed out that specialism at the present time was inevitable, and no one could train his senses or muscles to consummate expertness in the use of all the now multitudinous instruments of research and treatment. The great thing was to keep the special departments in touch with the main body of the profession, to see that they were conducted on rational lines, and that the departments of practice detached by it did not become refuges for empirics or imperfectly equipped practitioners. He pleaded with specialists of all types and varieties to avail themselves of the advantages which the society offered. While himself proud of being a specialist, he was prouder still of belonging to a great and magnanimous profession, and, in respect of his speciality, he urged that it was hardly a speciality at all, or only in a very restricted sense. It was, indeed, almost coextensive with medical practice as a whole. He regretted that those who devoted themselves to medical psychology were often compelled to spread themselves far beyond medical practice, and to merge their professional capacity in non-scientific and comparatively menial avocations. He admitted, however, that the attempt to completely separate administration from treatment was not likely to prove successful on a large scale. He looked forward to the organisation of hospitals for the treatment of mental disease on the lines submitted to the London County Council by Mr. Brudenell Carter, where psychology could be studied and systematic investigation, teaching, and demonstration carried on. He insisted on the necessity for a just conception of the relation of body and mind, and he alluded *en passant* to the materialistic constructions placed on this relationship—convictions based on sensory stimulation being accorded more weight than was accorded to other classes of belief. He protested against the view that mind was to be regarded as simply a result of cerebral activity or chemical transformations in the nerve centres. The series of phenomena separating mind from matter stood apart: a neural process and a mental process had nothing in common, and the facts of consciousness were not explained by the facts of brain function; in fact, psychology was not merely a branch of mechanics, and mind could have no causal dependence on matter.

Mr. LOCKWOOD then read a paper on the Operation for the Radical Cure of Hydrocele by Excision of the Sac, which we print in full in this issue.—Mr. SWINFORD EDWARDS said that he had only excised the parietal tunic in relapsed cases. If the Edinburgh tincture of iron were used for injecting hydroceles relapses would not be so frequent, as that tincture was twice the strength of the English preparation. The treatment by injection could hardly be expected to succeed if there happened to be any chronic inflammation of the testis present or if the cyst happened to be multilocular. He related the case of a medical man who had cured himself of a hydrocele by the injection of corrosive sublimate of the strength of a grain to the ounce.—Mr. BRYANT said that he had recourse to the operation only after injection had failed to effect a cure. He was convinced that the failure to cure by injection of iodine was because too weak a solution was used. For the last twenty years he had used a mixture of equal parts of the liquor and the tincture, two or three drachms of which he injected into the sac; most of the cases so treated had proved successful. He thought that only the more severe cases should be treated by the operation which had been proposed. Some years ago he tried the effects of hot water as an injection, and he used it in four successive cases. In two of these the hydrocele was cured rapidly, though the injection caused subacute inflammation and a good deal of effusion, which was afterwards absorbed. These cases remained well when heard of long afterwards. The other two cases suppurated, though the water used had been boiled. In a few cases he used carbolic acid, with favourable results. In three cases he had excised, the sac, cutting away a considerable portion of the tunic, swabbing out the cavity with chloride of zinc solution or carbolic acid, and then plugging with iodoform gauze. The cavity rapidly contracted without suppuration, and this was a simpler plan than Mr. Lockwood's, especially for elderly patients.—Mr. WALLIS stated that he had operated on seven cases, one of which had suppurated. His method was to scrape the testicle with a sharp spoon, pare away the parietal layer, and then suture the wound, using no drain.—Mr. BIDWELL said that in two cases treated by injection he had subsequently to excise, and then he found some adhesions. In the first case he used a drain, but this was followed by some orchitis, and so afterwards he completely closed the wound without drainage. After excision the patients left the hospital in about ten days, but in injection cases he had as a rule to detain his patients longer than that. In many cases there seemed to be some re-formation of serous membrane. — Mr. LOCKWOOD, in reply, said that the injection of iodine was distinctly a painful process, and one that he would object to undergo himself; besides, it might excite epididymitis or orchitis. In many of the cases he had related the patients had previously been injected with all kinds of fluids, including the Edinburgh tincture. All his cases save one were well within a week and left the hospital in a fortnight. He held that treatment by excision of the sac was simpler and less troublesome as well as less painful than treatment by injection. He admitted that erasion might be desirable in some cases, but none of the instances he related seemed to require it. He adopted drainage because it did no harm and was a wise precaution.

PATHOLOGICAL SOCIETY OF LONDON.

Spontaneous Disruption of Calculi.—Primary Sarcoma of Vagina of Child.—Multiple Polypi of Stomach and Intestines.—Tertiary Syphilitic Lesions in Lymphatic Glands.—Exhibition of Specimens.

THE first ordinary meeting of this society for the present session was held on Oct. 15th, the President, Mr. H. T. BUTLIN, being in the chair.

On taking the chair for the first time Mr. BUTLIN expressed his thanks to the society for his election. He announced his intention of postponing his address until next year when the society would celebrate its fiftieth anniversary.

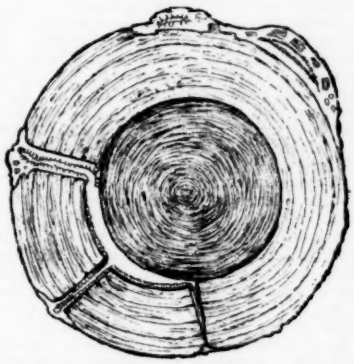
Dr. PLOWRIGHT read a paper on the Spontaneous Fracture of Uric Acid Calculi. The subject of the communication was a man aged seventy-two years from whose bladder there were removed 236 fragments and six entire calculi in the process of spontaneous fracture. The base of the bladder was occupied by several sacculi or pockets about half an inch across, which contained the fragments, the calculi, and pus-laden urine. The sacculi were formed by hernia-like protrusions of the mucous membrane between the reticulated muscular fibres of the

bladder, and were so placed as never to be emptied during life. The entire calculi were mapped out into segments by elevated ridges, and upon section each segment was seen to be lifted up, being separated from the nucleus of the calculus below and from the other segments by cracks or fissures sufficiently wide to admit the point of a pen-knife. (Fig. 1.) They were held together only by the ridges on the exterior of the calculus. These ridges consisted of uric acid

FIG. 1.

with a trace of ammonia. The same substance in the form of a greyish-white deposit covered not only the exterior of all the calculi and fragments, but extended into the interior of the fissures, covering their sides with a granular or nodular layer. (Fig. 3.) Towards the outer extremities of the fissures, opposite the one or two outer concentric laminæ of the calculus, it was deposited much more abundantly, so as to constitute an obtuse wedge when seen in section (Fig. 2),

FIG. 2.



by the increase of which the fissure was opened. The fragments were, as a rule, more or less wedge-shaped, but convex externally when they corresponded to the exterior of the calculus, and concave internally when they had been lifted away from the nucleus. In some cases only one or two segments had been lifted out from a calculus. (Fig. 2.)

FIG. 3.

On the surface of the calculi the deposit often formed blister-like elevations, which might be perforated in the centre like volcanic craters. On section the upper wall of the blisters was seen to consist not only of this whitish-grey deposit, but also of fragments of the outer concentric laminæ of the calculus that had been upheaved by and remained embedded in it, and which were easily recognisable by their yellow colour and striation. When pressure was applied to a calculus with sufficient force to crush it the fracture took place not only by a separation between the concentric laminæ, but also at right angles to them, along what might be called planes of radial cleavage. The tendency to radial fracture could often be observed in the sections of calculi in museums, but it was best shown in the structure of artificial calculi as pointed out by Rainey in his book on Molecular Coalescence. We might, therefore, regard a calculus as an assemblage of pyramids arranged with their bases externally. In the case under consideration the new deposit of uric acid on the exterior had taken place in such a manner as sometimes to force up the outer laminæ and sometimes to open the inter-pyramidal sutures. When once an opening had been made between two pyramids the fissure spread inwards, the deposit acting as a wedge, so that the calculus became split in exactly the same way as a log of wood would be. The transverse section of an endogenous trunk presented many similarities to the section of a calculus. The pith answered to the nucleus, the annular rings to the concentric laminæ, and the medullary rays to the planes of radial cleavage. If a wedge were driven a short distance into such a log of wood parallel to its length and then pressed forcibly sideways it would lift a segment out of the trunk. The fissure between the woody fibres passed first inwards towards the pith, but when the wedge was pressed sideways the fissure turned off sharply at right angles and travelled in the line of the annular rings for a certain distance, but if the sideway pressure of the wedge were continued the fissure would turn upwards in the direction of the medullary rays and a piece of wood would be prised out. The process was identical in these calculi, the lateral pressure being caused by the wedge-like deposit shown at Fig. 2. Rainey showed in the work above mentioned that when the artificial calculi formed by the action of potassium carbonate on solutions of gum arabic were placed in denser solutions of the colloid than that in which they were originally formed they tended to disintegrate. This was just what had happened in the present case. The lower parts of the calculi were continually immersed in the pus-laden urine of the pocket, while their upper portions were bathed in comparatively pure urine.—Dr. ORD said he thought that the calculi found in the vesical sacculi could scarcely have been dropped into them like letters into the post-box. He thought that the disintegration did not depend upon concussion or upon the action of alcoholic or other preservative. That the lesion was a spontaneous fracture or disruption was shown in that it was an unconformable addition to a regular stratified formation. This might come about either in an explosive way, as he had shown elsewhere, or by more subtle disintegration from outside—e.g., by a change in the colloid which surrounded the calculus; or yet again there might be a gradual erosion of the surface from molecular disintegration. He was unable fully to accept the wedge theory which had been propounded by Dr. Plowright.—Mr. REGINALD HARRISON quoted Bigelow as stating that the human bladder could break two or more stones as the human hand could break two or more walnuts. Though this might, perhaps, be true in a limited sense, explanation must be sought in other directions. In the case related the bladder seemed to have been converted into a number of test-tubes in which these processes had gone on.—Mr. W. G. SPENCER inquired as to the nature of the force which split calculi from the outside. The instances shown reminded him of the splits in a cliff into which earth had afterwards fallen. A more exact statement as to the chemical composition of the different layers was desirable. The blistering which had been observed on the surface of the calculi was probably the first stage in the downward degeneration of their organic constituents, the ultimate result of the degeneration being carbonic acid and water.—Mr. BUCKSTON BROWNE said he had met with about half a dozen instances of spontaneous fracture of calculi, and they had always been found in cases in which the bladder was sacculated or in which there existed a post-prostatic pouch. The stones found in the latter place were often of semilunar shape, like a French roll, and were composed of a number of calculi which had undergone spontaneous fracture, and then became cemented together and moulded into an accurate cast of the pouch. The discovery that spontaneous fracture had occurred would militate as a point in favour of lithotomy as against lithotrity.—Dr. PLOWRIGHT, in reply, said that the stones were not moulded into each sacculus, but five or six of them lay loose in each pouch. Though crystals as a rule were

incapable of exerting any force, yet mortar and fine plaster could be split by crystallisation.

Mr. D'ARCY POWER showed a case of Primary Sarcoma of the Vagina associated with Multiple Polypi occurring in a child. The patient was aged two years and four months. She had suffered for fourteen months from a purulent vaginal discharge, and during the last five months from severe bearing-down pains. New growths had been observed in the vagina, and some of them had been removed by the practitioner who had charge of the case. The child was taken ill on May 20th, when she retched and had much abdominal pain. She had complete retention of urine for forty-eight hours, which was relieved by suprapubic puncture. She died with symptoms of uræmia on May 24th. Digital examination of the vagina during life showed that the entrance was blocked by greyish masses resembling œdematous granulation tissue, whilst the upper part of the vagina contained a tumour which was firmly adherent to its wall. It grew from the right side and from the posterior wall of the canal and extended as high as the finger could reach. The mass was cylindrical in shape and was very hard. An examination per rectum, however, showed that it infiltrated the recto-vaginal septum. The post-mortem examination showed that the vagina measured three and a half inches in length and two and a half inches in its transverse diameter. The mucous membrane was greatly congested. The middle and lower portions of its posterior wall were covered with pedunculated growths, some simple and gelatinous and others more solid and rounded. All the growths were covered with vaginal mucous membrane, and there was no ulceration except on the surface of those nearest the ostium vaginæ. A large mass of new growth entirely blocked the upper part of the vagina and was continuous with a perfectly circular tumour measuring two inches in its transverse diameter, which lay between the vagina and the rectum. Mr. Power said that the case was a rare one, but he had collected abstracts of twenty-five other cases which had been placed upon record by English and German surgeons. He deduced the following conclusions from a consideration of these cases. Primary sarcoma of the vagina in children was often associated with the presence of myxomatous polypi in the vagina. The polypi were recognised earlier than the sarcoma, for they grew nearer to the ostium vaginæ. The malignant growth was perhaps found more often upon the anterior than upon the posterior wall. It was therefore the rule for children affected with a vaginal sarcoma to suffer from retention of urine, whilst only exceptionally were the functions of the rectum interfered with. The growth did not disseminate, for the child generally died from the mechanical effects of the tumour before dissemination took place. The growth was generally a round or spindle celled sarcoma. The prognosis was in the highest degree unsatisfactory, as death had taken place in nearly every case. Operative treatment was most difficult even in the earliest stages, for the growth had a tendency to infiltrate the tissue between the bladder and vagina. The neck of the bladder was pressed upon, and the retention of urine could only be treated effectively by a suprapubic cystotomy.—The PRESIDENT remarked that in the case of sarcoma of the vagina which he had examined the bladder and urethra also contained growths, but there was no general dissemination. The structure in that case was a fibro-sarcoma.

Dr. WM. COLLIER showed a specimen of Multiple Polypi of the Stomach and Intestines from a young man aged twenty-one years, who was admitted to the Radcliffe Infirmary, Oxford, on June 28th last and died on July 12th. His illness commenced about twelve months previously with pain across the upper part of the abdomen and vomiting. The symptoms gradually increased in severity, and for some months before admission he had noticeably lost flesh and strength. The pain seemed not to be much affected by food, and on one or two occasions the vomit had been streaked with blood. When admitted the patient looked very pinched and ill. The tongue was covered with dark-brown fur. Nothing could be discovered on abdominal examination. While in the infirmary he vomited daily and often seemed to be in very severe abdominal pain; the bowels were constipated. He was at first fed on broth, milk puddings, bread-and-milk, and egg beaten up in milk; but on account of the pain a week after admission his diet was confined to four ounces of peptonised milk every second hour. On the evening of July 10th he was seized with pain of more than usual severity and the vomiting became more urgent. On the following morning his condition was evidently critical, the pain and vomiting had continued throughout the night, and the abdomen was becoming distended. A distinct tumour could be made out running obliquely downwards across the abdomen from right to left; it was dull on percussion. After consultation it was decided to open the abdomen and explore. On doing so a large intussusception was found and was without much difficulty reduced. In spite of this the patient's condition did not improve and about twenty hours later he died.

Mr. JACKSON CLARKE read a paper on Tertiary Syphilitic Lesions in Lymphatic Glands. He thought that tertiary syphilitic lesions were somewhat more common than was generally believed. He had recently observed an instance in an out-patient at the North-West London Hospital. A woman aged forty-two years attended for treatment from time to time for tertiary lesions of the skin, nasal fossæ, &c., and reappeared after an interval of unauthorised non-attendance in a condition of marked anæmia and complaining of lumps on the left side of the neck. These proved to be the deep cervical and axillary glands, which were as large as filberts and hard. At the time there were no active lesions elsewhere. The swellings rapidly subsided under iodide of potassium. He had only once observed gummata in lymphatic glands in the course of about 1000 necropsies. This was in the case of a man aged twenty-five years, who was admitted into St. Mary's Hospital, under the care of Sir William Broadbent, complaining of pain in the right side of the chest and in the right lumbar region. There were hæmaturia and slight fever. He had several attacks of pain in the right chest, accompanied by dyspnœa and collapse. He died in one of these attacks some days after admission. After death the right renal vein was found to be occluded by clot, the right kidney was enlarged, pale, and fibrosed, and it contained in the pelvis a circumscribed ulcer with raised edges. The right lung contained several infarcts. In the liver there were numerous gummata. The cervical glands, which had been noticed to be enlarged in life, were also found to contain gummata. In some cases there was a difficulty in distinguishing between syphilitic and tuberculous glands. As an instance Mr. Clarke mentioned the case of a child aged two years. When the patient first came under notice there was around the base of the glans penis a raised indurated sore. The history was that the child had been circumcised. All went well for four weeks, when the sore began to form. The lesion had been present for three weeks when the child was brought to the hospital. At this time there were, besides the sore, marked swelling of the inguinal glands, a general eruption of macules, papules, pustules, and some tense bullæ. There was also slight snuffling. The patient was treated with mercury for three weeks and the rash disappeared, but the inguinal glands continued to enlarge and began to soften. The glands were removed, and sections showed typical tuberculosis, with characteristic bacilli. In this case there might have been a mixed infection, but no exposure to syphilis could be traced.—The PRESIDENT said that these lesions were almost always overlooked. He had seen cases of cervical lymphadenitis in the out-patient department in which there was a history of syphilis and which were cured by the administration of iodide of potassium. Syphilitic glands were more indolent than tuberculous, were often doughy in places, and were more angular and less rounded. A mixed infection of tubercle and syphilis was not rare.

The following card specimens were shown:—

Dr. KANTHACK: (1) Dissecting Aneurysm; (2) Cylindroma of Large Intestine; and (3) Diffuse Primary Sarcoma of Liver.

Dr. VOELCKER: (1) Uterus Unicornis, with Congenital Malposition of the Right Kidney; (2) Epithelioma of Œsophagus invading the Trachea and Left Bronchus—Cystic Change in the Secondary Deposits in the Liver and Stomach; and (3) Ulceration of Large Intestine in a case of Enteric Fever.

Mr. TARGETT: Old Injury of Humerus from an Egyptian Mummy.

CLINICAL SOCIETY OF LONDON.

Cases of Excision of the Temporo-Maxillary Articulation in Children.—Sudden Death from Cardiac Syphiloma.—Traumatic Derangement of Knee-joint.

THE first ordinary meeting of this society for the present session took place on Oct. 11th, Mr. GODLEE, Vice-President, being in the chair.

Mr. ARBUTHNOT LANE read the notes of some cases of

Bony Ankylosis of the Temporo-Maxillary Articulation in Children which had come under his care, and on which he had operated with success. The first was a boy aged nine, the duration of the ankylosis being less than three years; the second was a girl aged twelve, and the duration less than two and a half years; the third was a boy aged four, and the duration less than three years; and the fourth was a girl aged ten, and the duration less than three years. He had also operated on a fifth case, the particulars of which he did not refer to. All these were cases of complete bony ankylosis, and the results obtained were most satisfactory, the wounds healing immediately, and a perfectly new joint developing very rapidly. Mr. Lane found considerable difficulty in taking away a sufficient quantity of bone in these cases owing to the vertical shortening of the ramus, due to a more or less complete want of development of the head and neck of the jaw, the upper and posterior portion of the ramus in old-standing cases becoming very broad and thick, and uniting over a considerable area with the temporal bone. He considered that the occasional failure of this operation resulted from an insufficiently free removal of bone.—Mr. HOWARD MARSH said that it would be of advantage to have these patients shown at a clinical meeting; he himself had had no opportunity of treating such cases in children.—Mr. F. C. WALLIS said he had helped Mr. Bloxam to operate on a woman aged thirty who had ankylosis of both temporo-maxillary joints, with consequent mal-development of jaw. Six months after the operation very good movement was obtained.—Mr. TARGETT said that a boy had been under his care with unilateral ankylosis of the jaw; there had been no history of otorrhœa. He found that simple section of the jaw gave no good result, and he had to excavate away the head of the bone. Movement at the present time was good, and the incisor teeth could be separated to the extent of an inch.—Mr. A. E. J. BARKER said that he had operated on two cases. The first, a girl aged fifteen, fell over the banisters and struck the lower jaw, complete ankylosis resulting, and the incisor teeth could only be separated for an eighth of an inch. He made a horizontal incision over the neck of the bone, chiselled away the head, and hollowed out a glenoid cavity. The second case was that of a child aged eight, and there was a scar over the region of the joint after disease of the ear. The joint was completely ankylosed, and the same operation was done. The result was good, the separation between the incisors being now more than an inch. In the older days before aseptic surgery ankylosis frequently followed the operation, because suppuration was permitted to ensue.—Mr. LANE, in reply, said that two of the cases had already been shown at clinical meetings of the society, and of the remainder one lived at such a distance from London that it was impracticable to bring the patient up for exhibition.

Sir DYCE DUCKWORTH read a paper on a case of Sudden Death due to Cardiac Syphiloma. The patient, a strongly-built man aged thirty-five, was walking in the street carrying a little boy on Oct. 7th, 1894, when he suddenly fell down and expired. The body was carried to St. Bartholomew's Hospital, and was examined on Oct. 9th. A very meagre antecedent history was obtained, which threw no light on the nature of the case. There was evidence of old syphilitic disease on the tongue and on the glans penis. A small gumma was found in the left lung. The heart weighed twenty-two ounces, and had firm adhesions to the pericardium both at the apex and at the base. The right ventricle was hypertrophied and dilated. The valves were natural. The left ventricle was hypertrophied and dilated. There was a round depression in its wall above the apex the diameter of a shilling, covered by long adhesions. This was due to a thinning of the wall, with much endocardial thickening. A large aneurysmal pouch was found behind the posterior cusp of the mitral valve. This appeared from without as a tumour growing from the base of the heart, completely covering the left auricle. Its walls were half-an-inch thick, and the pericardium was closely adherent over it. On section, the muscle was found to be replaced by tough fibrous tissue, with foci of gelatinous matter. The endocardium was greatly thickened and fibrous. Microscopic examination proved it to be gummatous in nature, with patches of caseation. The smaller arteries showed signs of endarteritis. These appearances indicated plainly a recent gummatous growth at the base of the left ventricle, and a similar, but older, one near the apex of that cavity. The fact of sudden death as a frequent occurrence in cases of this nature was alluded to, and it was pointed out that these clinical features were but little known and necessarily but seldom recognised. The morbid anatomy was well understood. He had collected particulars of fourteen similar cases. Death occurred almost, if not quite, suddenly in eight of these cases. The disease was rare in women, only one of the fourteen cases having occurred in that sex. The mean age of all the patients was thirty-two. Many of the cases appeared to have been previously devoid of urgent symptoms. In some there had been pericardial pain. It was pointed out that graver symptoms were to be expected when fibrotic changes followed on the evolution of the gummatous growths and when they led to aneurysms of the ventricular walls. The valves were usually not involved, and hence murmurs were not to be met with, as in the case of rheumatic endocarditis. The ventricles and their septum were the common sites of these growths. Tendency to fatal and sudden syncope was probably explicable by the fact that endarteritis affected the coronary arteries in part, and possibly by the occurrence of embolisms from the softening contents of aneurysms into coronary arterial branches, the ventricular walls degenerating in consequence and becoming gradually intolerant of strain. The great object was to make an early diagnosis when possible, and to seek for syphilitic concomitants in cases where there were obvious cardiac symptoms, such as palpitation or infrequency of pulse, hypertrophy, dilatation, &c., and no signs of involvement of the valves. The treatment was to employ iodide of potassium in full doses.—Dr. SIDNEY PHILLIPS said that he had collected a large number of cases and specimens. Two years ago he made a post-mortem examination of a patient who died in his chair with a newspaper in his hand. He had previously suffered from an acute attack of pain in the chest. He inquired whether, in the case under discussion, there had been a history of previous symptoms. In cases of cardiac gumma the patients were often found dead, but in all the cases in which he had been able to make inquiry there had been previous symptoms. In the instance above referred to the gumma was found in the left ventricle and near the apex of the heart, and this was the usual position of the lesion in the cases which caused sudden death. Cardiac aneurysm was a common complication, and he related a case to illustrate this—that of a young soldier who had suffered from syphilis and had been under treatment for four years, then came under treatment with an anginal attack which proved fatal. Syphilitic general fibrosis gave rise usually to dilatation and pseudo-hypertrophy.—Dr. HALE WHITE said that cases of genuine gumma of the heart were found to be rare at Guy's Hospital, only occurring once in several years; but syphilitic fibrosis of the heart occurred once a year—that is, 1 in 500 necropsies. He thought perhaps that a syphilitic affection of the heart might be diagnosed, but it appeared to him impossible clinically to draw a distinction between syphilitic fibrosis and gumma; if it yielded to treatment it would probably be a gumma. Of nine cases, six died absolutely suddenly, two of them being out-patients for pain and shortness of breath, while the seventh, eighth, and ninth cases were sufficiently ill to be in hospital at the time of their death. A series of cases collected by Dr. Fagge twenty years ago gave practically the same results.—Sir DYCE DUCKWORTH, in reply, said that more facts in the clinical history of these cases were required. He had lately been treating a case of hypertrophy of the left ventricle with palpitation and a history of constitutional syphilis within the last two years. Under treatment the patient had lost most of his symptoms.

Mr. BARKER described a case of Traumatic Derangement of the Knee-joint due apparently to fracture of the spine of the tibia, for which an exploratory arthrotomy was done. The patient received the injury while in a mine in South Africa, and came home quite disabled. In walking the knee was very insecure and inclined to give way inwards, which movement was accompanied by a sharp audible snap. The head of the tibia could be slipped backwards on the femur either by active or passive movement, but could only be replaced by hard pressure forwards. The nature of the injury seemed to be obscure, but it appeared possible that the spine of the tibia was broken off or the posterior crucial ligament torn through. The patient being anxious for an exploratory operation and relief, which only was considered possible, Mr. Barker laid open the knee-joint by sawing across the patella, and found the crucial ligaments apparently intact. The spine of the tibia was found, however, to be marked at its base by a deep groove, into which the handle of a scalpel could be

laid, and having the appearance as if it had resulted from imperfect union of a fracture of the process. Nothing further was done. The wound healed *per primam intentionem* and the limb was kept immobile for some months. When last seen, more than a year after operation, the patient had a useful limb, with none of the former abnormal movements. He was advised to be cautious in using it, however.—Mr. E. WILLETT asked what evidence was in existence that ligaments would contract when irritated.—Mr. GODLEE said that he had shown a specimen at the Pathological Society of the knee-joint of a boy whose leg had been crushed, and there was a large skin wound, necessitating amputation in the mid-thigh. On dissection of the knee-joint the spine of the tibia was found to be torn off. He had seen another case this year in a woman of small stature aged thirty, who had injured her knee in getting off a 'bus. There was no exaggeration of rotation of the tibia inwards or outwards, and she had been supplied with an apparatus for fixing the knee.—Mr. BARKER, in reply, held that if ligaments were irritated and the joint afterwards left at rest the ligament would shorten, as in stiff joints after inflammation, without intra-articular lesion.

HUNTERIAN SOCIETY.

President's Address.—The Infectiousness of Rheumatism.

THE first meeting of the winter session was held on Oct. 9th at the London Institution, the President, Mr. CHARTERS J. SYMONDS, being in the chair.

Mr. SYMONDS gave a short address on the Advisability or Justifiability of Explorative Abdominal Operations. His first postulate was that if we can feel sure that no serious additional risk is run by the patient through the operation, then it is not only advisable but practically imperative. This class of cases he illustrated by several examples of insuperable (by other means) obstruction. He next spoke of the possibility of serious risk brought on by operation, and this group he illustrated by a case of urgent symptoms induced by gut adherent to the abdominal parietes, in which rupture of the intestine during separation was unavoidable. A third group of abdominal operations he spoke of—viz., exploration with excision of a kidney—and laid down the inflexible rule that no nephrectomy should be done unless the other kidney had been definitely examined and found healthy. Lastly, he urged the great responsibility physicians now accepted if they waited till the bacillus coli communis had gained a firm footing in the tissues of the patient outside the lumen of the gut.

The PRESIDENT then called on Mr. F. R. Humphreys for his paper on the Infectiousness of Rheumatism.

Mr. HUMPHREYS referred to the recent lectures by Dr. Newsholme on the subject and to other writings. He then proceeded to give several illustrative cases in which skin affections, follicular tonsillitis of a somewhat special type, and acute rheumatism had seemed to him to definitely follow one another as if by infection, either in the same patient or in different members of the same household. He had taken careful notes of many such cases, and to him they seemed to point very strongly—though, he admitted, by no means conclusively—to the specific bacillary nature of true rheumatism.

Dr. SHADWELL gave illustrative cases in which he traced rheumatism to drain poisoning, and to the unwashed blankets in which a patient suffering from rheumatic fever had lain. He felt prepared to accept the infectious nature of the malady.

Mr. STEVENS hoped to see the specific bacillus found by scientific workers.

Dr. H. FOX thought it difficult to accept the bacillary theory, but drew attention to the relation or likeness of the tissues affected by rheumatism. His mind leaned more towards a nervous origin for the disease, quoting the historical case of the man who was cured of acute rheumatism by the shock of a railway accident.

Dr. LYON thought there was danger in accepting the bacillary view in that it might lead our minds too far from clinical causes—viz., lowering of the vital activity of the body with exposure—that, in fact, it might draw all attention to the seed, leaving the soil in a state of neglect.

Mr. J. T. FOX compared the possible bacillus to the malarial organism, and stated that, though malaria as a rule rendered the patient liable to future attacks, there was at least one variety that rendered the patient (he himself having experienced it) immune to future malarial paroxsyms.

Mr. HUMPHREYS briefly replied, and mentioned a case in which from similar exposure to drain air the husband contracted typhoid fever and the wife acute rheumatism.

SOUTH-WEST LONDON MEDICAL SOCIETY.

Exhibition of Cases.

A CLINICAL meeting of this society was held at the Wandsworth and Clapham Union Infirmary on Oct. 9th, the President for the year, Dr. GILBERT RICHARDSON of Putney, being in the chair.

Mr. BREWARD NEAL, the medical superintendent of the infirmary, showed the following cases: 1. Sarcoma of the Axilla in a man aged forty-four years, following the removal of a warty growth from the wrist a year previously. 2. Progressive Muscular Atrophy in a man aged sixty-one years. 3. A case of old-standing Inguinal Hernia in which symptoms of strangulation came on half an hour after prolapse of the hernia. Failing reduction, and owing to the condition of the man (whose age was sixty-four years) becoming rapidly more urgent, operation was performed in two hours, with a successful result. 4. Chronic Rheumatoid Arthritis in a woman aged twenty-eight years, accompanied by vaginal discharge of a doubtful character. 5. A case of Foul Ulcer dependent upon Diseased Metatarsal Bone, which was successfully excised, leaving only a small sinus. 6. Two cases of Senile Scirrhus of the Breast.

At the conclusion of the evening a hearty vote of thanks was passed to Mr. Neal for his courtesy and hospitality.

READING PATHOLOGICAL SOCIETY.

Inaugural Address.

THE fifty-fourth annual meeting of this society was held in the library of the Royal Berks Hospital on Oct. 9th, the President, Mr. OLIVER C. MAURICE, being in the chair.

Dr. STEPHEN MACKENZIE, physician to the London Hospital, gave the inaugural address of the session, a most valuable discourse illustrated by numerous drawings, on the advantage to be derived from the Study of Dermatology. He said the study of diseases of the skin had not hitherto met with the attention the importance of the subject demanded, although every practitioner met with cases of which it was important he should have an accurate knowledge; besides which it afforded one of the best fields for educating the observant faculties and training the mind to discern the phenomena of disease and for watching the effects of remedies. Nowhere else, with the exception of the visible mucous membranes, could he observe the whole pathological processes so well. He described the skin physiologically and the influences affecting it, and then dealt most exhaustively with the many diseases to which the epidermis is liable and with their treatment. A few of his conclusions may be briefly stated, such as that many skin diseases generally believed to be constitutional were traceable to bacteria, and that very few skin diseases were directly traceable to dietetic causes, though improper diet might largely aggravate existing eruptions, so that the avoidance of alcohol, the regulation of the bowels, and the cure of anæmia were of infinitely more importance in treatment than diet; at the same time, the disease must be cured by external means. The golden rule by which to preserve a healthy skin, as well as to avoid various ills, was to observe regularity, moderation, and temperance in matters of eating and drinking, especially as regarded alcohol.

The lecturer was heartily thanked in the name of the society by Dr. Shettle for his most valuable address, the vote being carried by acclamation, and thanks to the President concluded the meeting. Later the annual dinner was held at the Queen's Hotel, Reading, under the presidency of Mr. O. C. Maurice.

WIGAN MEDICAL SOCIETY.

The Clinical Value of Inoculation Experiments in Guinea-pigs in the Diagnosis of Tuberculous Phthisis.

A MEETING of this society was held on Oct. 3rd, when a good number of members were present, and several visitors

from Preston and St. Helens. Mr. WM. MITCHELL ROOCROFT, President, occupied the chair.

Dr. T. HARRIS read a paper on the Clinical Value of Inoculation Experiments in Guinea-pigs in the Diagnosis of Tuberculous Phthisis. He referred to the difficulty which existed in diagnosing between some cases of simple chronic pneumonia of a non-tuberculous nature and chronic tuberculous fibroid phthisis. He brought forward a series of cases which he had met with during the past two years where the sputum had been repeatedly examined by himself and other observers for tubercle bacilli with negative results, and the sputum from these cases he had inoculated into guinea-pigs without producing tuberculosis. He also referred to some cases where the expectoration was fetid and was due to bronchiectasis, and where tubercle bacilli were absent from the sputum. The sputum from these cases, which had also been inoculated into guinea-pigs, gave negative results. A third series of cases were those of repeated examinations of the sputum from cases which had failed for a long time to show tubercle bacilli, but where, after a number of examinations had been made, a few of the organisms were discovered. In all these latter cases the guinea-pigs which were inoculated with the expectoration became tuberculous. The experiments were considered of value as check experiments where repeated examinations of sputum from doubtful cases of pulmonary disease failed to show the presence of tubercle bacilli, and they also confirmed the view that chronic fibroid disease of the lung, usually left by an acute pneumonia, does exist and that such cases are of a non-tuberculous nature.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

President's Address on Otorrhœa.—Venesection in a case of Puerperal Eclampsia.—Exhibition of Cases and Specimens.

AT a meeting of this society held on Oct. 8th Dr. S. JOHNSTON, the retiring President, introduced Dr. Adolph Bronner as the President for the coming year.

Dr. ADOLPH BRONNER then delivered his presidential address on Otorrhœa, its Complications and their Treatment. Otorrhœa was the result of an inflammation of the mucous membrane of the middle ear caused by micro-organisms passing up the Eustachian tube from the pharynx; hence the importance of examining the throat in these cases. The difficulty of draining the tympanic cavity and the care to be used in syringing were next alluded to. In children otorrhœa is very common, 85 per cent. being the result of one investigation. The principal complications of otorrhœa are:—1. Granulations, which are to be touched with chromic acid or with ferric chloride. 2. In polypi the cold snare is generally used to remove these growths, attention being directed to the importance of dragging out the polypus by its roots. 3. Caries of the ossicles, removal of the ossicles being required in some cases. 4. Cases of disease of the attic, of the mastoid antrum, and of the mastoid cells were described. Clinical charts and pathological specimens were handed round illustrating the treatment of these complications. The different operations for mastoid diseases which are associated with the names of Swartze, Macewen, Koster, Bergmann, and Stacke were described. 5. The symptoms of brain abscess, either cerebral or cerebellar, were discussed, and Dr. Bronner detailed a case on which he had recently operated. The patient, aged thirty-three years, had been deaf on the left side for thirteen years. Eleven years ago she had two polypi removed, and since then had had a constant otorrhœa. When seen by Dr. Bronner the symptoms were earache, pain in the head, a small quantity of discharge from the left ear, mental confusion, slow pulse, and constipation. Dr. Bronner trephined one inch above the external auditory meatus, and with a trocar found pus. A drainage-tube which was inserted at the time of the operation came out on dressing the wound a few days afterwards and could not be replaced. In a few days pressure symptoms came on, necessitating drainage through the tegmen tympani. The patient then made an excellent recovery. 6. The symptoms of thrombosis of the lateral sinus are rigors, fever, vomiting, and œdema over the mastoid process, which is painful on percussion. The chief danger is pulmonary pyæmia. The treatment recommended was turning out the thrombus and plugging with boric acid. Some surgeons (Ballance and Lane) advocated tying the internal jugular vein in addition. 7. Many cases of local meningitis had been successfully treated by trephining and drainage. Cases were cited illustrating the different complications of middle-ear disease, and the instruments used in the operations arising therefrom were exhibited. The conclusions Dr. Bronner would direct attention to are: (1) the frequency of these diseases in infancy; (2) the necessity for operation; (3) the mastoid process should be carefully examined, and even if there be no external signs of disease the operation should be done if symptoms be present; and (4) the mastoid antrum should be opened before trephining.

Mr. MERCER read a paper on Venesection in a case of Puerperal Eclampsia. A patient in the eighth month of pregnancy was in convulsions; she was comatose and dropsical; the urine on boiling became solid. One-third of a grain of pilocarpin was given hypodermically, chloral and bromide were administered by the rectum, and a tent was introduced into the os uteri. Later chloroform was administered, and delivery was accomplished by the aid of forceps. After delivery the fits returned and were not controlled by treatment. Thirty ounces of blood were taken from the arm; the patient became conscious, had no more fits, and made an uninterrupted recovery.—The paper was discussed by Dr. A. Bronner, Dr. Goyder, Dr. Bell, and Dr. Gray, and Mr. Mercer replied.

Mr. WILMOT showed a man suffering from Lymphadenoma affecting the axillary, cervical, and inguinal glands.

Microscopical specimens were exhibited by Dr. MAJOR and Dr. CHAPMAN.

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Exhibition of Cases and Specimens.

THE annual general meeting of this society was held on Oct. 10th. Dr. JAMES DRUMMOND of South Shields, the newly elected President, was introduced to the chair.

Mr. WARDLE showed a patient on whom he had successfully operated for Diffuse Suppurative Peritonitis due to disease of the appendix. The abdomen was drained of two quarts of pus, and the appendix, though seen, was not removed on account of the critical condition of the patient. The drainage-tube was taken away at the end of forty-eight hours, and except for some fæcal discharge through the tube opening on the sixth day healing was uninterrupted. Mr. Wardle thought that in such cases the tube might be removed earlier than had been taught.

Mr. RUTHERFORD MORISON showed some cases of Syphilis, and Mr. PAGE a case in which Epithelioma of the Penis and Inguinal Glands had been mistaken for a syphilitic lesion.

Dr. D. DRUMMOND showed a man forty-eight years of age who had been troubled with a cough for two years. In the early stages of his illness all the signs and symptoms of tuberculous consolidation of the right apex were present, and the case was regarded as one of phthisis pulmonalis. During the last two months severe pain in the back, chest, and right arm had been the most prominent symptoms, and still more recently an enlarged gland was discovered under the left jaw. The gland was now very hard and fixed, and this, together with the severe pain and other signs of a growth in the anterior mediastinum, made the diagnosis of malignant disease of the lung easy, though the long history and the physical signs at first proved misleading.—Dr. DRUMMOND also showed a neurotic young man aged twenty-five years who had been lying in bed for five years and was reduced to the weight of 5 st. He was a very good example of the condition known as anorexia nervosa. The patient after a month of treatment has gained a stone in weight and is walking about. For the first fortnight of his stay in hospital, however, he did no good, and not until the nurse was forcibly impressed with the need of his getting well did any improvement result. The case illustrates two things—first, that a certain amount of compulsion must be used in such cases; and, secondly, that isolation was not essential.

Dr. HUME showed a boy aged fourteen years, together with a Tumour and his Upper Jaw, which he had excised. The history of the case was interesting, for four years before the patient received a blow on his left cheek which swelled immediately. The swelling soon became painless, but slowly

increased, and was removed on Sept. 2nd by the ordinary operation for excision of the upper jaw. Microscopically the tumour was a myeloid sarcoma.—Dr. HUME also showed a man on whom he had successfully performed Nephrectomy for what he regarded as a rare condition. The man was twenty-nine years of age. Five years ago he had his leg amputated for accident, and retention of urine, which followed, necessitated the use of a catheter. The catheter caused cystitis, and from this time he had urinary distress. Pain in the right kidney with pus in the urine suggested calculus, and the kidney was examined by drawing it out to the loin through the ordinary lumbar incision and palpating it, but it was neither incised nor punctured. Dr. Hume thought the danger of wound infection from puncturing even a healthy kidney was to be remembered. No calculus was discovered and the kidney was returned. For some months the patient was no better and no worse. Then the pain became more severe, and at last a swelling was discovered in the loin, evidently an enlarged kidney. Nephrectomy was performed on July 15th, 1895, after which for a time the urine was free from pus, but then there was some return. The patient's general condition was much improved. On section the kidney was found to be enlarged and studded with abscesses, and looked as if it might be tuberculous. The microscopist reports, however, that it is an example of ascending septic nephritis.

Dr. WARDLE exhibited a very large Gall-stone removed by Cholecystotomy from a woman over seventy years old. There was a history of frequent "spasms," but except for the absence of jaundice all the evidence was in favour of gall-stones. After a very severe attack, threatening life, cholecystotomy was performed. The gall-bladder walls were very thin and were firmly adherent to the stones, which had to be dissected out. Death followed from senile heart.

Dr. HUME exhibited a Myoma from the anterior vaginal wall of a middle-aged unmarried woman. Hæmorrhage was severe and frequent attacks of retention of urine called for the use of the catheter. The urethra was so elongated and tortuous that considerable difficulty was experienced with the catheter, and on one occasion the bladder had to be aspirated. The growth projected from the vulva, protruded the urinary meatus, and filled the whole vagina. It was enucleated after division of the vaginal wall, and the bleeding, which was severe, was arrested by tamponning. Dr. Hume could find no such growth described as a fibro-myoma of the vaginal wall.—Dr. HUME also showed an Inverted Uterus removed by Vaginal Hysterectomy. The inversion followed confinement four years before. Packing with iodoform gauze and different forms of elastic pressure were ineffectually tried before hysterectomy was performed. The patient made a good recovery.

Dr. MURPHY showed a Tongue excised for Epithelioma from a woman. The sex of the patient was of interest.—Dr. MURPHY also showed a Pessary of Indiarubber, filthy and corrugated, which had lain for years in the vagina of a patient supposed to be suffering from cancer.—Dr. MURPHY likewise showed an Enlarged and Cystic Ovary and a Normal Ovary and Tubes which he had taken from a patient without a vagina and with a nodule only to represent the uterus, who had suffered severely from abdominal pains.

Dr. D. DRUMMOND showed Congenital Cystic Kidneys taken from an adult. The case was correctly interpreted during life from the presence of uræmia and of symmetrical swellings of long duration in the renal region. The specimens were beautiful examples of the condition.—Dr. DRUMMOND also showed an Aneurysm of the Aorta which had pressed upon and obstructed the right bronchus. He had shown the patient at a previous meeting, and now exhibited the specimen obtained post mortem, for in connexion with it he had observed what he ventured to call a new physical sign. The respiration was stertorous. Over the right lung inspiration was loud and accompanied by rhonchi, as over the left, but in the right lung expiratory sounds were absent. That this was due to pressure on the right bronchus the specimen exhibited made certain.

LITERARY INTELLIGENCE.—The Queen has been graciously pleased to accept the dedication of an Indian translation of Mr. Samuel Osborn's book, "First Aid to the Injured." This book now appears in six languages—English, French, German, Italian, Japanese, and Hindustani.

Reviews and Notices of Books.

Medical Gynæcology: a Treatise on the Diseases of Women from the Standpoint of the Physician. By ALEXANDER J. C. SKENE, M.D., Professor of Gynæcology in the Long Island College Hospital, Brooklyn, New York, &c. With Illustrations. Edinburgh and London: Young J. Pentland. 1895.

DR. SKENE tells us in the preface that the present work has had its origin in a consciousness on his part that the science and art of medicine and surgery should be above all party questions, and that those who place a just estimate on both branches of the healing art and employ them without predilection and prejudice are the most successful and reliable. He holds that unreasonable devotion to either medicine or surgery is wrong. No doubt, as he says, there have been some who have been inclined to push the surgical treatment of the diseases of women to extremes, to the neglect of medicine; and, on the other hand, physicians who have had too much confidence in medicine and have occasionally failed to do their patients full justice. We are quite in accord with Dr. Skene as regards his temperate and judicial views on this matter. They might be studied with advantage by those who have taken extreme views one way or the other on this question. The work is divided into three parts. Part I. has to do with the primary differentiation of sex, development and growth during early life, and the conditions favourable to the evolution of normal organisation. The main object of this part of the book has been to consider the various means that best conduce to the development of a vigorous constitution. Part II., which comprises the largest portion of the work, deals with the characteristics and diseases of the active period of life, and Part III. with the phenomena connected with the transition from middle life to old age, and the diseases more especially likely to occur at that period. There is a good deal of information on the uses of electricity in gynæcology, on massage, on diet in disease, and on mental therapeutics. There is a useful chapter on unnatural habits, in which the author describes (1) the Invalid Habit and (2) the Opium Habit. The former is well defined as a singular perversion of life, mental and physical, seen among women who insist upon being invalids while there is nothing discoverable the matter with them. He distinguishes between this condition and hysteria and neurasthenia, though we must admit the task of separating them clinically seems to us a matter of the utmost difficulty. Dr. Skene does not believe in massage and electricity for the cure of the "invalid habit." In his opinion, the only effectual treatment is by means of "the occupation and exercise cure"—in other words, by voluntary coöperation on the part of the patient. We think there is a great deal of truth in the views here expressed. As regards the opium habit, no doubt, as the author thinks, the foundation of it is often laid in the use of opium after operations. He has found opium of great use in controlling excessive sexual desire, it being in this respect far superior to the bromides. The opium habit in his experience has sometimes been found to induce amenorrhœa. In making a diagnosis of the opium habit Dr. Skene lays stress on the temperature: it rises when the opium is withdrawn—sometimes to as much as 103·5° F.—and falls when the opium is given again. With respect to the treatment of this habit, he thinks the gradual abandonment of the drug is the only rational and safe plan.

A noticeable feature of the book is that there are very few illustrations. We have read it with much interest, and consider that it contains a great deal of useful information on the more especially medical aspects of gynæcology.

Fonti ed Estensione del Diritto Sanitario. Dal Professore CARLO RUATA. Città di Castello. 1894. (*Sources and Extension of Sanitary Law.* By Professor C. Ruata.)

THE able and energetic occupant of the chair of Materia Medica in the University of Perugia has contributed more than one substantial work to sanitary literature. His treatise on Public Hygiene, favourably reviewed in THE LANCET, was but the prelude to other achievements in the same field, the last of which, embodied in the publication before us, yields to none of its predecessors in scientific importance or expository skill.

Professor Ruata is deeply impressed with the saying of one of the founders of young Italy, Massimo D'Azeglio, the successor of Cavour, "L'Italia è fatta; facciamo gl' Italiani" (Italy is made; let us make Italians); and to the end thus indicated he seeks to lead up by infusing into his compatriots a more vital and more effective "sense of citizenship" than they seem to possess. He finds them, above all things, deficient in that "public consciousness" which inspires combined and consentaneous effort in face of the thousand-and-one maladies which decimate the people—that spirit of sacrifice which makes a man exert himself not so much for individual safety as for the common weal. He points, in proof of the lack of this spirit, to the mode in which zymotic disease is generated and diffused, and demonstrates, with detailed narrative and convincing logic, how Italy loses thousands of lives annually for want of that wise altruism which sees in the good of one's neighbour the conditions of personal salvation. The man who by culpable neglect, *a fortiori* by set purpose, contributes to the vitiation of the atmosphere, for example, sins against a hygienic right, that of respiring pure air, which is the appanage of the humblest as of the highest; so that it is the duty of the State to enforce observance of the law, protecting that right when neglected, and to punish its violator when caught in the act. Above and before all administrative or penal enactment, however, comes the education of the individual, firstly, in that knowledge which underlies all other, the knowledge (in the late Sir James Coxe's oft-quoted phrase) by which every citizen "becomes the intelligent custodian of his own health"; and, secondly, in that principle, expressed for all time by the great English poet, which makes "all men's good each man's rule." Very instructive as a vindication of these positions is Professor Ruata's account of the fearful ravages of small-pox in Sicily during the years 1888 and 1889—an object-lesson in public health which ought, in view of the perennial anti-vaccination conflict raging in Great Britain, to be made *publici juris* in an English translation. So also is his re-enforcement of a warning once and again given forth in our columns in the matter of serotherapy and diphtheria—a warning against the tendency of the most approved therapeutic measures to supersede sanitary effort. "Sanitary law," he says most aptly, "not only does not want deaths from diphtheria, but it does not want patients from the disease; it, therefore, distrusts those palliatives which serve to keep the population in that fatal lethargy in which it is always content to lie with regard to preventable maladies." Not less opportune, particularly in Southern Europe, is his exposition of how atmospheric and aqueous contamination is to be guarded against by the conversion of mediæval into modern cities, as in Turin, where the widening of streets and the knocking down of rookeries have lowered the mortality from 32 to 20 per 1000.

The whole treatise forms a vivid and impressive introduction to the study of sanitary law, on which, indeed, Professor Ruata delivered a memorable series of lectures before the Perugia School. For not a little of his detail or illustration he avows himself indebted to the "più autorevole giornale di medicina esistente" (the most authoritative of existing journals of medicine), as he is pleased to call THE LANCET. But neither that indebtedness on his part, nor the sense of compliment on our own, need affect our judgment of his treatise or our deliverance on its merits, worthy as these are of an author whose hygienic achievement has approved itself not only to Italian schools but to those in both hemispheres.

Le Moyen Age Médical: les Médecins au Moyen Age; les grandes Epidémies; Démonomanie; Sorcellerie; Spiritisme; la Médecine dans la Littérature du Moyen Age; Historiens; Poètes; Auteurs dramatiques. Par le Dr. EDMOND DUPOUY, Ancien Interne de Charenton et des Asiles d'Aliénés; Lauréat de la Société Médico-psychologique; Prix Esquirol et Prix Aubanel. Paris: Société d'Editions Scientifiques, 4, Rue Antoine-Dubois. 1895.

THE first section of this interesting volume is devoted to "Les Médecins au Moyen Age," commencing at the fourth century of our era, when Western Europe, invaded by the barbarians, witnessed the flight of men of science and letters to that famed Alexandria which was for a certain time to become their home. Medicine, however, made but little progress in these early times, until in the year 805 the Emperor Charlemagne "decreed" that it should be added to the studies of the schools. The laws of Théodoric, observed up to the eleventh century, were not, however, calculated to make the science or practice of medicine popular. Amongst the curious laws of that period a surgeon was to receive "cinq sous pour l'opération de la cataracte grise." Reform, however, came at last, in 1206, by the foundation of the University of Paris, which comprised a Faculty of Medicine and numerous students, many of whom became men of mark. From that period progress became slow, but steady, up to the time of the foundation of the College of Surgeons of Paris in 1271. This part of the work contains many classical and interesting quotations. That professional services then as now were not always appreciated is proved by the following lines:—

"L'élève d'Hippocrate en sa pénible étude
Est trop souvent payé de noire ingratitude."

The remarks on Baths and Bathing are amusing and copious; there are also long extracts from the writings of Montaigne. The second section, "Les Grandes Épidémies," treats of La Peste, La Peste Noire, Le Mal des Ardents, Les Fièvres Éruptives au VI^e^ Siècle, La Suette d'Angleterre, Le Scorbut, La Lèpre, and La Syphilis. Each of these subjects is treated at considerable length, occupying in all over seventy pages.

The third part is entitled "La Démonomanie au Moyen Age." Commencing with the appearance of the spirit of Æsculap counselling Galen to bleed for an attack of pleurisy, we pass to Soranus, who had recourse to magic chants as remedies; whilst later in the thirteenth century a *pater noster* and other prayers were recommended for fractures of the bones. The description of the Épidémie of Sorcellerie in Artois in 1459 is extremely interesting. This is followed by numerous examples of hallucinations, of intercourse with demons, and painful descriptions of the burning of thousands of the unfortunate victims of the fanaticism of the period. To the credit of the profession of these dark ages be it said that many of its most enlightened members vigorously opposed these brutalities.

"L'Hystéro-Démonomanie des Cloitres" forms a separate chapter and is worthy of much attention. This is followed by an article of great interest on "Hystérie et Force psychique," which deserves to be studied.

It is not a little agreeable to pass from such serious subjects as are presented in the preceding portions of this work to the concluding part, entitled "La Médecine dans la Littérature du Moyen Age." In this part the author, considering that it is in the writings of the poets and dramatic authors of an epoch that the fullest appreciation of the medical ideas of that time are to be found, makes liberal illustrative quotations from the poems, plays, and farces of the Moyen Age. The work throughout forms a record of great value, and affords ample evidence of the varied and untiring research of the learned author.

THE LANCET.

LONDON: SATURDAY, OCTOBER 19, 1895.

THE humanity of the medical profession is not often called in question. When it is so we feel it our duty to look at the facts. A letter in the *Western Daily Mercury* headed "The Medical Profession and Humanity," and signed by HENRY IVEY of Broad Oak, furnishes such an occasion. Mr. IVEY permits himself to say or to imply that in three cases of accident in his own neighbourhood the attention of medical men to serious accidents was hesitating or slow, and that the consequences in two out of three cases were fatal. In the first case a boy was injured. The medical man applied to demurred to going to the accident on the ground that he was not the attendant of the employer. He went when it was shown that he attended the boy's family. In the second case a boy was torn with a threshing-machine and was bleeding. The first medical man applied to declined to go as the messenger could give no assurance as to the payment of the fee. A second was seen and required some responsible person to be found before he would attend. Delay was occasioned and the sufferer died. In the third case a party were travelling home at midnight in a trap when the shafts broke, and two persons were badly injured, of whom one died. One practitioner called (at midnight) declined to attend on the ground that he was not the family surgeon. Such is the burden of the statement of Mr. HENRY IVEY of Broad Oak. We have no right to question its accuracy, but we should remember that it is a one-sided statement, and it is very probable that if the medical version of these facts were given it would differ materially from the one before us.

It is no part of our inclination or of our duty to apologise for any want of humanity in medical men when it is really established. The broad reputation of the profession in this respect is too precious for us not to be jealous of any instance to the contrary that might seem to tarnish it. But it is our business to press two or three considerations—not for the first time—that seem to be overlooked by men like Mr. IVEY. They are apt to assume that all accidents are grave ones, and that the medical man who hesitates about rushing to them knows them to be such. This is a great mistake. Under the head of accidents medical men are summoned at all hours to incidents which are not grave and which can afford to wait for the regular attendant of the persons injured, whose presence is always an advantage to the patient. Accidents figure very largely in the eye of the public, but they do not figure so seriously in that of the profession. They are only a part of the great field of medical duty, and in rushing to them a medical man may be leaving more important duty. Mr. IVEY says: "Accidents suspend the common rules of life with all classes *save one*." This is as ungenerous as it is unjust. For all the centuries the public have left members of the medical profession to look after accidents with scarcely any provision for their being rewarded. Our profession has had to do all "the humanity." And it has done it so spontaneously, so uncalculatingly, that the public have come to think it is bound to do it, and to do it for nothing. It is an everyday experience that while there is a competition to rush for the medical man in cases of accident, there is a common consent of neglect to see that he is remunerated, and very often a repudiation of responsibility, more marked in those who have been most eager to demand his immediate attendance. It is really the public who are at fault in this matter. And if Mr. IVEY had taken occasion to read the public a lesson on this subject he would have been better advised than in lecturing members of the profession on what he is pleased to call their "caprice."

The Samaritan service that is rendered to the public by the profession in all its ranks is enormous. Medical men are never safe. We have known in the holiday season which has just closed and in other seasons the most striking instances of medical men, at great personal trouble to themselves, acting the part of the "good Samaritan." But this is nothing compared with the "good Samaritan" part played by the practitioner in a poor neighbourhood, who is at the mercy of every accident, many of which are occasioned in discreditable ways and happen when the public are in bed. Mr. IVEY himself has an inkling of the truth in this matter. "I do not say that in any case gentlemen of the faculty should be placed at the 'people's caprice' with no rights of their own to observe." But this is very much the contention of Mr. IVEY'S letter. In some other countries there is provision made at the public expense for services of emergency such as the profession is constantly called on to perform. Before medical men can be regarded as public servants it must be shown that the public have engaged them to act and have discharged their own duty. Meanwhile, without judging particular instances on imperfect data, we feel sure that medical men as a class will not be found wanting in those sentiments of humanity which have always been strong in the profession. There is something in the very nature of our duties which exposes us more than other men to unreasonable and untimely demands on our time and on our very health and life. The public have been somewhat demoralised by the ready way in which our help has been always given. This demoralisation must be checked, but in checking it the profession will not generally fall into any great error of selfishness.

IT was a favourite axiom of the late Sir ANDREW CLARK that chronic diseases—always excepting those which arise from external agencies or inherited defects—are in the main dependent upon violations of "physiological laws." That may have seemed a broad and sweeping statement, yet the more such diseases are studied the truer does the axiom appear. In itself, perhaps, the idea embodied in this phraseology had nothing especially novel or striking. Its merit lay rather in its application—an application which this sagacious and experienced physician never wearied of enforcing. "Return," he would say, "to the ways of physiological righteousness and you will be healed." The advice was easily given, but to follow it in its integrity must often have been exceedingly difficult to the patient.

Yet it was practical and rational, and were it not for the highly artificial manner in which lives are spent, or for the restricting influence of habits that have become a second nature, it might not have been so arduous to follow. The underlying principle seems to be this—that in diseases there is a disturbance of the physiological mechanism; the organism works with discomfort; and there is nothing for it but to alter the conditions if we wish to restore it to sounder action. The law may not have been consciously transgressed; on the contrary, from some defect in the natural interchanges between blood and tissue, in perverted metabolism, imperfect elimination, or what not, the apparatus itself may have got out of gear, and unless rectified the change, both functional and structural, may become permanent and dangerous to life itself.

The art of medicine consists, not in a direct attack upon the lesion or the forcible expulsion of peccant material, but rather in the rendering of aid to the natural forces, by whose operation alone can the restoration be effected and the disease, as we say, "cured." The time has long gone by when the former doctrine obtained and when the treatment of disease was dominated by fantastic notions upon the nature of morbid processes. Now, however, whether we admit it or not, we are in all our practice dominated by a strong belief in the all-sufficiency of the powers of nature to repair injury or restore function, provided that they are enabled to exert themselves. Nor does this apply to such obvious remedial measures as the enforcement of rest, the removal of noxious influences, or the reinforcement of vital power by careful dietetic rules. It embraces the whole sphere of therapeutics, for even the administration of drugs is, or should be, directed to the same end. If we cling to the alternative view that medicines act in some special manner, each one appropriate to a particular derangement, it is because of imperfection of knowledge and the thraldom of tradition. That diseases owning a specific origin from the introduction from without of a parasite or virus are to be successfully combated by specific drugs or antidotes, if only we could find them, cannot be gainsaid. But it is different with the large group of disorders due to defective mechanism, perverted secretion, or irregular metabolism. The initial factor in many such affections is often absolutely unknown; no doubt it has been some violation of physiological law—but how or in what direction it seems futile to inquire. The declared disease, that which we are called upon to treat, presents us with the pathological results of the vicious action, and the only hope for their removal rests in changing the whole nutritive conditions, and thus perchance restoring the normal physiological activities. There is a large class of maladies in which such efforts might at first sight seem doomed to failure. These are those which depend on tissue degeneration and the accumulation of its effete products. But when we reflect that life consists in an alternating cycle of degeneration and repair, we become aware that there are in the living organism itself the ways and means for removal of dead matter and the production of new living substance. There is no fixed limit to the recuperative powers, and all treatment must have for its aim their support and excitation.

This mode of viewing therapeutics is more hopeful than that which relegates degenerative changes, particularly those involving vitally important organs, to the class of irremediable affections. Much has been done by the recognition of this fact in the treatment of chronic heart disease, especially those forms in which there are muscular failure and degeneration. The extension of the same principle even to so admittedly hopeless a lesion as arterial atheroma was expounded in these columns last week by Dr. LAUDER BRUNTON with his customary lucidity and wealth of physiological examples. The means he suggests are simple, but they have a rational basis, and they are founded on the facts of physiology as well as on a firm faith in the *vis medicatrix naturæ*.

A CASE under the Lunacy Act of very considerable importance both to the profession and to the public was concluded at the Birmingham Quarter Sessions on the 11th inst., the prosecution having been undertaken at the instance of the Treasury. It was alleged that the defendant, a surgeon practising in Birmingham, had unlawfully taken charge of Mrs. JOHNSTON, a lunatic, and kept her at his residence, an unlicensed building, without an order from the judicial authorities. It was further alleged upon the indictment that the defendant had used unnecessary mechanical means of bodily restraint, and that he had not kept a record of such restraint as prescribed by the statutes. Mrs. JOHNSTON was the widow of a surgeon who left her a large income under certain restrictions. It was stated that, on becoming a lunatic, she was handed over to the defendant's care to prevent the trustees under the will retaining her income and using only such portions as were necessary for her maintenance. Her detention came to the knowledge of the lunacy authorities, and she was removed to the asylum, where she died within twelve days. The defendant disclaimed any intention to do wrong, though admitting technical offences. He declared that he was actuated by higher motives than gain, and that what he did was in the honest belief that it was the best thing for his patient. The Recorder, in summing up, said he could not see how there could possibly be any defence to the first and third counts, charging the defendant with detaining Mrs. JOHNSTON and not keeping a record; while the second count—that of using mechanical restraint—was the most serious. It was hard to think, he added, that the medical man was unaware of the fact that the woman had been out of her mind before and that her husband in his will had given directions as to her maintenance in the future should such symptoms again manifest themselves. The jury returned a verdict of "Guilty" on all three counts. The Recorder stated that he had great difficulty in arriving at a conclusion as to what punishment he should inflict to vindicate the law. He was willing to admit that the defendant acted upon an honest but ignorant belief, and therefore decided to impose a fine of £50.

The case is an important one because it illustrates in itself many of the points that arise day by day in

connexion with the question as to what is the proper mode of providing for and treating insane persons who have independent incomes. It also demonstrates the difficulties which the law has to deal with in lunacy cases of the sort where any question of honest ignorance arises. The gravamen of the charge does not lie altogether in what was actually done by the defendant to his patient, for she no doubt required asylum treatment, and it is not beyond possibility that some amount of mechanical restraint might for a time be needed. To our thinking the most serious feature of this particular case, leaving out of the question the higher motives and honest beliefs of the defendant, rests upon the "ignorance" that was relied upon for the defence. If a medical man has not a knowledge of the law in a matter of the sort it is not to be expected that he would feel it to be his duty to make himself acquainted with the principles which govern the use of mechanical restraint or to see the necessity for recording the fact that it has been used. Without wishing to dwell at any length on this aspect of the case, we are anxious to point out that the treatment of single paying patients in private houses, whether of medical or lay members of the community, is not in itself either harmful or undesirable; and the law, accepting this view, makes the needful provision for it and has to see that the statutes and regulations for safeguarding the interests of the patients are duly carried out.

It is always a pity when public mistrust of the medical dealing with lunatics is accentuated by the avoidance of the necessary preliminaries, which are neither expensive nor complicated. When these preliminaries have been arranged and the patient certificated, the rules for after-guidance in the official treatment of the case are simple enough; and it seems to us that acquaintance with the requirements of the law is dearly purchased, as in the present instance, by the infliction of a fine or the possible risk of imprisonment. Ignorance of the law is the last thing that should be pleaded. Those who dislike wading through the technicalities of Acts of Parliament will find plenty of explanatory works which bring the requirements of the Lunacy Act of 1890 within easy grasp of the ordinary reader. One of the most recent and most complete of these books of reference is that published under the title of "The Insane and the Law,"[1] which will be found to be a most useful guide as to the detention, treatment, and other matters connected with the civil and criminal relationships of the insane. We may add in conclusion that an interesting discussion followed the reading by Dr. L. WEATHERLY of a paper on the Law in relation to Single Patients at the recent meeting of the British Medical Association.

[1] The Insane and the Law. By Percy Smith, M.D., F. Pitt-Lewis, Q.C., and A. J. Hawke. J. & A. Churchill. London: 1895.

PRESENTATION.—Mr. W. J. C. Keats, L.R.C.P. Lond., M.R.C.S., on his leaving, after four years' service, the female side of the Greenwich Union Infirmary and the Workhouse, to take the medical superintendence of the male side, has been presented by the sisters and nurses of the Infirmary with a dressing table set in silver and tortoiseshell, and by the nurses of the Workhouse with a handsome brass inkstand, as marks of their esteem.

Annotations.

"Ne quid nimis."

FIELD-MARSHAL LORD WOLSELEY AND THE ARMY MEDICAL STAFF.

WE are informed that at one of the last parades held by Field-Marshal Lord Wolseley in Dublin, observing that the men of the Medical Staff Corps attending the parade saluted on his arrival on the ground by "carrying swords," he immediately directed Major-General Montmorency (Viscount Frankfort de Montmorency) to bid the medical officer commanding to issue the order "return swords," and that when giving General Montmorency these instructions Lord Wolseley added that "these men have no right to draw their swords; they are not soldiers, but civil attendants on the sick." It is well known in Dublin military circles that the medical officer in command on the occasion has reported the circumstances of the case and requested written instructions as to whether in future, if such an order be again issued, he is to obey the General Officer Commanding or the Queen's Regulations, under the directions of which he was very properly acting at the parade. We do not doubt the nature of the answer which he will receive, but may be permitted to dwell a little upon the slight—for such it may be regarded—that the Commander-in-Chief-elect has put upon a branch of the service. Lord Wolseley is a most distinguished soldier, and the post to which he is to be called is one imperatively demanding wisdom and justice, and that his reputation for these qualities should be universally recognised. It is to these qualities we appeal when we ask him to reflect that the officers and men of the Medical Department of the Army have to endure the same perils and hardships which he, in common with the distinctly combatant branches, has endured. He must, we feel, certainly know how important well-directed medical aid is on the field of battle in these days of arms of precision, how great the necessity is to increase that feeling of *bonne camaraderie* which must exist between the different departments of an efficient army, and of what consequence it is to the welfare of our troops to procure the services of medical officers, not only competent in their art, but able, by general education and knowledge of the world, to fill efficiently the position of an officer in the army. It will be altogether impossible to obtain such men for the Army Medical Staff if the term "soldier" in its fullest sense does not include those representatives of medicine who risk their lives in their country's service as freely and as bravely as the officers of any other branch of the Service. The roll of the Victoria Cross bears eloquent testimony to this fact.

THE MIDWIVES QUESTION.

Two cases have recently been reported which show the extraordinary carelessness and ignorance which occasionally prevail among the poor with regard to the great questions of life and death. In the one a woman aged thirty-two was taken in labour at 1 A.M. and gave birth to a stillborn child. At 1.30 A.M. a female friend came in, and at about 2 A.M. a midwife. "Nothing was done by either to alleviate the suffering of the woman and there was some delay in sending for a medical man." The medical man who gave evidence stated that he was called at about 5 A.M. and found the woman much collapsed from loss of blood; two hours later she died. At the inquest a verdict of death from natural causes accelerated by want of proper medical aid was returned, which verdict seems to us to be faulty. Post-partum hæmorrhage is decidedly unnatural. But let that pass; the point on which we wish to lay stress is the

extraordinary indifference shown by the two women. There they sat for some three hours and did nothing, while the unfortunate woman's life was slowly ebbing away, and be it noted one of the women was a so-called midwife. In the other case the deceased was a child aged five weeks. A medical man had attended her, and told the parents to send for some medicine; this they neglected to do. The child died, and the parents thereupon asked the medical man for a certificate, which he very properly refused. Hence an inquest. The midwife admitted in this case that she had advised the mother to send for a clergyman to baptise the child before sending for medical aid. Further inquiries elicited the fact that the mother of the child was entitled to receive a sum of money upon the death of a baptised child, so that apparently pecuniary and not theological scruples were at the bottom of the midwife's directions, and certainly clubs founded on this basis seem to us to furnish a stronger argument against infant baptism than any Anabaptist ones. Anyway, cases like this would appear to strengthen the hands of those who object to infant insurance. The verdict in this case was the same as in the former, although given by a different jury. Neglect is common enough, but that it is natural we certainly doubt. One juryman remarked that all midwives ought to be certificated. Be this as it may, indifference such as is shown in the two instances on which we have commented is happily not common in any rank of life.

THE PROFESSOR, THE MAGISTRATE, AND THE LAW.

PROFESSOR RAY LANKESTER is a man of respectability and personal honour as distinguished as his learning; Mr. Newton is an upright judge; Constable Wise, 11 C R., and Constable Hutchins, 29 C R., are unimpeachable witnesses; and Inspector John Cox is another. We—at least, we hope it—are fair-minded. Having thus cleared the ground, we desire to comment briefly on the awkward dilemma which has brought these individuals, in themselves unexceptionable, into relations whose asperity has been so clear and unavoidable, and whose results must be to one—the one who went to the wall—as annoying as the mind can well imagine. Some of the facts in the dispute which recently took place between Professor Ray Lankester and certain of the C Division of Police are not denied. Professor Ray Lankester was standing still at a time when and in a place whence he was told to move on. He did not move on. Thereupon he was arrested. He says that he did not understand that he was being ordered about by the police, being a new hand in a fraças with the force, and that he waited to get a cab to come to him at the kerb. The police say that he refused to move in a disorderly manner, and incited six or eight other characters, professionally disorderly, to do the same. On being arrested Professor Ray Lankester, remembering who he was and what he had at stake, described the proceedings of the police as silly. The police hold that he confessed in those words to personal silliness, which is different and not borne out at all by the subsequent attitude of the arrested man. Before Mr. Newton the insinuation was made that Professor Ray Lankester was drunk. The case was adjourned for a week, during which time Mr. Newton suffered a good deal as he pondered it in its different bearings. Upon the resumption of the hearing Professor Ray Lankester proved by several witnesses that he was not drunk at the time, and could not have been, so the insinuation was withdrawn, and the magistrate was very severe with the prisoner's attorney for disproving it, forgetfully alleging that it had never been made save by that same attorney! Then Professor Ray Lankester told his story, to the truth of which he had no witnesses, the six or eight disorderly characters having been let go free by a gallant constabulary. The magistrate heard Constable Wise's story again, and Constable Hutchins's confirmation thereof, and gave judgment in accordance with their version of the story. "For," said Mr. Newton, "I have known the officers ever since I have been sitting at this court, and I have never heard their truthfulness questioned." So Professor Ray Lankester was bound over to keep the peace in the sum of £10, though, as he pointed out, his record was better than the constables', for he had been a respectable, sober, and honourable man in the eyes of other men for over thirty years, whereas the admirable *dossier* of the policemen only claimed to extend over twenty years. We tender our sympathies to Professor Ray Lankester, who, though not a member of our profession, is closely connected with medical work both by family ties and the nature of his well-known occupations.

ANALYSTS AND MILK ADULTERATION.

IT is a pity that something cannot be done to put an end to the farcical proceedings which occur over and over again in the police-courts in connexion with summonses for milk adulteration. It is wearisome to read almost every week that the public analyst certified to the effect that the milk was adulterated with a percentage—in cases of dispute generally small—of water, but that the officials at Somerset House, on the matter being referred to them, reported there was "no evidence of the presence of added water." The case is then usually dismissed, the authorities who undertook the prosecution having to pay the fee for the Somerset House certificate and the costs of the court. Such a case occurred last week, when Mr. Bevan, the analyst to the Middlesex County Council, certified of a certain milk that it contained 8 per cent. of added water. This analysis was confirmed by Dr. Stevenson and Mr. Hehner. The referees at Somerset House, however, could not regard the milk as adulterated. The summons was dismissed. These differences of opinion arose most probably from different views as to the standard normal quality of milk. Somerset House officials maintain one standard and public analysts another, and so long as this state of things continues so long will it be a farce and an incongruity to institute proceedings, or at least whilst there is a possibility of the results showing upon the standard of the public analyst that the milk is adulterated, and upon the standard of Somerset House that it is genuine but of poor quality. We assume that in these cases the analytical results are in agreement, and it is only their interpretation which gives rise to these differences of opinion. That the question is beset with some difficulty we are aware, but surely the public analysts and the Somerset House officials, being members of one profession, could meet together and discuss this subject quietly and in a purely scientific spirit, with the view of smoothing down the contentions which lead them to disagree, and which can only bring ridicule and contempt upon themselves and their work from a public ignorant of the real causes of the differences. The public analysts are, of course, in a large majority, and their opinions are entitled to be heard; and their action, contrary to that of Somerset House, has a tendency to raise and maintain the quality of our milk-supply rather than to countenance the selling of milk of a most enfeebled description. Somerset House officials argue that, when it is found that a cow yields milk of a very low quality, in the interests of justice they feel bound to adjudge all other samples by this genuine but poor and abnormal specimen. In taking this view, however, it is obvious that the lowering of the quality of our milk-supply is encouraged—that is to say, there would be nothing to prevent the watering down of a rich milk to this low standard, and in some

cases the addition of water for this purpose might be considerable. Worse than that, the bulk of the milk might be increased, for aught that is known to the contrary, with a veritable solution of filthiness abounding in disease. We repeat that we trust that the analysts and Somerset House officials will be led to unite on this question, and will arrive at some amicable arrangement which shall be just to the public and to the seller, and bring no longer any discredit upon themselves and their profession, as in the ridiculous and unedifying spectacle which they present in those cases in which the "summons is dismissed" because one analyst says that the milk is adulterated and another that it is not. If this cannot be done, then we appeal strongly to the Food Products Adulteration Committee, whose labours will recommence next session, to suggest a way out of this absurd and grotesque position.

A CASE OF SYMPHYSIOTOMY.

THE current number of the *Revue Obstétricale Internationale* contains an interesting report on a case of symphysiotomy occurring in Professor Crouzat's clinique at Toulouse. The indications for the operation were those which we ourselves regard as the most important for undertaking the operation—namely, failure of the forceps to effect delivery, an absence of any great pelvic contraction, and the fact of the child being alive. In the case referred to, Tarnier's forceps was twice used, but the fœtal head could not be made to engage in the pelvis. Symphysiotomy was then performed by Professor Jeannel. The operation appears to have been an easy one, except for a little preliminary difficulty in arresting the hæmorrhage. The pubic bones were separated for six centimetres and a half. The child was then easily delivered with Tarnier's forceps. The patient made a good recovery, getting up thirty-five days after the operation. The event as regards the child, however, was unfavourable. It seems that somewhat extensive bruising of the head was caused during the attempts to effect delivery with the forceps. These injuries, in place of rapidly improving and disappearing within a short period after birth, as is generally the case, became the starting-point of a suppurative cellulitis, which proved fatal in fourteen days. The lesson of the case would seem to be that the unfavourable result to the child might have been avoided if the attempt to deliver with the forceps had been less vigorous, and if symphysiotomy had been resorted to earlier.

LONDON'S FUTURE WATER-SUPPLY.

AFTER all, Londoners may have reason to be thankful that they were within measurable distance of a water famine last summer and last winter, since it has brought the water question into extraordinary prominence, amounting to an enthusiasm which may perhaps cause our legislators to look elsewhere and seek a supply about the abundance and quality of which there shall not be the slightest doubt. The Welsh project is the one most favourably considered, and it is even urged that if London is apathetic much longer in the matter of securing a new water area there will be few watersheds left, as those which exist now are being rapidly secured and appropriated by provincial districts. A committee of the London County Council have already inspected the area involved in the scheme of Mr. Binnie, the County Council's engineer, to bring a supply of water to the metropolis from Wales. Their report was presented at a meeting of the Council last Tuesday. The committee were very much impressed with the scheme of reservoirs which appear to possess all the advantages of a pure and plentiful supply. On the former point, that of purity, the chemist has already reported, but it will be more satisfactory to have further information than that now possessed by the Council, and samples of the water for analysis will shortly be submitted, not only to the Council's chemist, but also to an independent chemist to be hereafter selected. With a view to proceeding as rapidly as possible with the surveys of the Usk and Llangorse areas, and completing the survey of the Upper Wye Valley, the committee, acting under the authority conferred by the Council's resolution of July 30th authorised the engineer to retain the services of Mr. R. Allen and Mr. Stillingfleet at salaries at the rate of £200 a year each, and to negotiate with Mr. Hassard, whose name has been for some years associated with a scheme of supply from Wales, for all his plans and sections derived from the information of the Ordnance sheets, especially those relating to Llangorse and the Upper Usk and part of the conduit to London. The assistants above mentioned are at work contouring the various reservoir sites and setting out the necessary railway diversions, and they have commenced with the catchwater conduits in the Usk Valley. It is pointed out that one of the advantages of the scheme is that it may be carried out by instalments, and that, assuming the present sources of supply to be maintained, a supplementary supply of purer and more wholesome water may be obtained from Wales sufficient for the requirements of London for forty years hence, at a cost little if at all exceeding that which would be incurred by the formation of reservoirs in the Thames Valley. At the same meeting of the Council on Tuesday last the Parliamentary Committee submitted a report stating that as eight Bills for the purchase of the water companys' undertakings had been suspended they had had to consider what course should be taken in regard to them. In the end they recommended that the Council "do invite Her Majesty's Government either to deal with the question themselves or to appoint a Royal Commission to do so." Mr. Stuart, M.P., moved as an amendment "That the Bills for the purchase of the London water companies be proceeded with." This amendment, however, was lost by a majority of one, the numbers being 54 against it and 53 in its favour. The London Water Bills are therefore abandoned for a time.

COGNAC v. CORN SPIRIT.

AT a recent meeting of the Académie de Médecine M. Daremberg endeavoured to prove that while both beverages are hurtful, if not poisonous, the higher-priced cognac brandies are relatively much less wholesome than (as one commentator puts it) the *eaux-de-vie* that are sold for two *sous* over "the zinc"—that is, retailed in the low drinking-establishments which are just as common in Paris as gin palaces are in London. Chemical analysis shows that what are generally esteemed as the best brands contain a far larger proportion of furfurol and amylic alcohol than do the cheaper spirits distilled from corn, and for this reason alone, even though there were no other, the use of cognac must be injurious to health. M. Daremberg, however, does not rely solely upon chemistry in support of his theory, but maintains that his thesis is sustained and confirmed by the results of his experiments on animals. Ten cubic centimetres of "authentic" cognac, costing sixty francs the bottle, when injected into a vein in a rabbit's ear caused instantaneous death, whereas a similar dose of promiscuously purchased *eau-de-vie* was not attended by immediately fatal effects. The opposition was represented chiefly by M. Laborde, who pleaded the extreme sensitiveness of rabbits to the action of alcohol, as well as the uncertainty attending intra-venous injections, which may kill the subject quite irrespectively of the nature of the fluid introduced. The speaker had, moreover, analysed cognac himself, and found it to contain little or no furfurol. In his opinion the alcohol of commerce must necessarily be more injurious than that derived solely from the grape. M. Magnan agreed with the originator of the discussion that all alcohols were poisons. He, too, had performed

some experiments, but the subjects operated upon were dogs. Fifty grammes of wine alcohol caused depression and drunkenness, which disappeared in about five hours. Alcohol made from beetroot produced a comatose slumber with complete anæsthesia after from eight to ten minutes, this condition lasting twenty-four hours and the animal continuing out of sorts for several days. Alcohol extracted from maize gave similar results, with the addition during the coma stage of subsultus tendinum. No alteration of the consecutive phenomena was observable on repetition of the experiments after rectification of the three alcohols. On conclusion of the discussion the Academy decided to submit the question to a commission consisting of MM. Bergeron, Laborde, Lancereaux, Riche, Motet, and Magnan. The commentator already alluded to[1] terminates his annotation with the following sensible remarks: "When the best cognac is misused it becomes worthless. What should be avoided is the habitual consumption of eau-de-vie, the *petit verre* after each repast, even though it should be 'authentic' cognac. *Petits verres* soon accumulate in the organism; the hardest stone yields to the constant drop."

ISOLATION ON A BACTERIOLOGICAL BASIS.

MR. WYNTER BLYTH has just presented a special report to the Marylebone Sanitary Committee on the desirability of providing in the district facilities for the bacteriological examination of cases notified as diphtheria. The necessity of such a course is based in the main upon the fact that several urgent cases of diphtheria—presumably from Mr. Blyth's district—have recently been refused admission into the Metropolitan Asylums Board hospitals owing to the accommodation for diphtheria cases being exhausted. Mr. Blyth points out to the sanitary committee that in all probability a considerable number of cases notified as diphtheria are not really cases of this disease, and the only method at the present time of settling the diagnosis of doubtful cases is by means of a bacteriological examination. In this connexion he refers to the efforts of the city of New York in the United States, and of the Bristol Town Council in this country. We note in passing that Mr. Blyth observes that Bristol is the only "public body" in this country which has organised a systematic bacteriological examination of reputed diphtheria cases; but we feel sure that Mr. Blyth will forgive us for pointing out that both Dr. Thresh in Essex and Mr. Fosbroke in Worcestershire have done much in this direction. However, to revert to the main issue of Mr. Blyth's report, he proposes, with the coöperation of the medical practitioners in his district, to obtain a bacteriological examination of all cases notified as diphtheria, and by this selective process he anticipates being able to discriminate between patients whom it is desirable to isolate in hospital and those who may be otherwise dealt with. For instance, in cases where the clinical symptoms are not inconsistent with commonplace sore-throat, and a bacteriological examination does not support the diagnosis of diphtheria, there is, Mr. Blyth observes, no need for isolation either at home or in hospital. When, however, the symptoms strongly support a diagnosis of diphtheria, while the bacteriological examination gives no decided evidence, such cases will be regarded and treated as diphtheria. Mr. Blyth particularly observes that the proposed examinations are not for the purpose of disputing, revising, or correcting medical certificates, but simply with a view of an economical selection of cases for isolation during pressure upon the accommodation. There can, it seems to us, be no objection to a trial of the proposed method, but at the same time we should decline to concede to a general principle that isolation in the future is to be dependent upon the result of bacteriological examination. A single examination necessitates a delay of at least twenty-four hours, and a delay such as this in a disease like diphtheria may often be fraught with most serious consequences. Even under the circumstances above set forth, bacteriological selection, based on examination of a single sample, should be supplemented by a full consideration of the environment of individual cases. It is interesting to reflect whether from the standpoint of economy in hospital beds exceptional facilities for bacteriological examination may not bring to light cases which would otherwise have passed unrecognised, and so tend to increase the number of true diphtheria cases seeking admission. Under any circumstances, Mr. Blyth's proposal, if carried into effect, cannot fail to add something to the sum total of our knowledge of diphtheria. We should add that Mr. Blyth's scheme has been unanimously adopted by the sanitary committee, and that it will be discussed at the next meeting of the sanitary authority. Doubtless at this discussion the isolation accommodation of London will come in for a fair share of attention.

[1] Dr. E. Masse of Bordeaux.

THE HABIT OF DIRT-EATING IN CHILDREN.

A VERY interesting paper on this curious habit is contributed by Dr. John Thomson to the recent number of the Edinburgh Hospital Reports. He gives some account of the habit as observed by travellers in different parts of the world and by agriculturists among unhealthy young animals, especially lambs. Dr. Thomson finds it occurs in two classes: (1) in cases of ill-health from tuberculosis &c., anæmia being almost always a prominent symptom; and (2) in healthy children, the habit being formed in infancy and disappearing spontaneously when the children are about three years old. Dr. Thomson regards the habit in this latter class as analogous to thumb-sucking, perpetual rocking to and fro, or constant rolling in bed, in which some children find delight and which they lose when they pass out of infancy. In the cachectic cases it has been thought that the habit might be started by an instinctive craving for earthy salts, such as lime and iron, but the evidence is not conclusive. The materials selected in Dr. Thomson's cases seem to have been chiefly wall-plaster and cinders. One child varied this last pastime by pushing the hearth brush into the ashes and then licking the dust off it as a great delicacy. The habit, as is well known, is very common among idiots and imbeciles, but Dr. Thomson's cases were free from mental disorder. Even in the cases where spontaneous recovery did not occur a very short period of treatment in hospital, during which the patient was denied access to his wonted luxuries, was sufficient to break the habit. Dirt-eating may, however, lead to serious consequences when the material eaten—such as the soil—contains deleterious matter. This is seen among the native Egyptians, who, observing the marvellous fertilising power of Nile mud on their fields, imagine it must be equally nutritious for men and habitually eat it, with the result of infecting themselves with the ova of anchylostoma, bilharzia, and other parasites.

THE HEALTH OF ARMY HORSES.

THERE is nothing particularly noteworthy in the Annual Statistical and General Report of the Army Veterinary Department for the year ending March 31st, 1895, which has been recently issued. As in former reports, it deals only with the Government horses and mules in this country, Egypt, and South Africa, those in India being excluded. The strength for the year was 13,192 horses, 1915 chargers, and 178 mules. The inefficiency from disease and injurie was considerably higher than in the previous year—5·36 per cent.—being 67·35 as compared with 61·99. No reason is given for this increase. The mortality was also higher, being 2·37 of the average strength, whereas in 1893 it was

2·09 per cent. Of the deaths 1·53 per cent. died and 0·84 per cent. were destroyed. The average number of days each horse was under veterinary treatment was twenty-one, the same as in the three previous years. There was a slight decrease in the cases of specific disease, though what is designated "epizootic fever" appears to have been rather prevalent, the percentage of admissions being 0·32 of the average strength of the army horses. The highly infectious malady of young horses popularly known as "strangles," which is a suppurative adenitis, was also more frequent than in the previous year; but no case of glanders was reported, this being the seventh year in which its absence from among army horses has been noted. This fact is sufficient proof that the disease can be eradicated and kept at bay, even without recourse being had to mallein. The admissions to veterinary treatment, as well as mortality, were greatest among young horses. The average age was nine years. A table is given showing the attendance at the classes in the Veterinary School at Aldershot, and also the results of the working of the Vaccine Institute at the same place. It appears that lymph for vaccinating purposes was prepared for 40,558 people during the year; and this, added to what remained on hand from the previous year, allowed material to be issued for 42,351 persons. The results obtained from the use of the lymph at home stations are reported as "excellent" and at foreign stations as "very good." The number of calves vaccinated during the year was 14, giving an average yield for 2897 persons from each calf; the greatest amount of lymph from one calf was sufficient for 3866 persons, and the smallest for 1200. The total working expenses of the Institute for the year, including cost of calves, instruments, &c., was only £72 11*s.* 9½*d.* Since the opening of the Institute in March, 1889, lymph has been prepared for 247,137 persons belonging to the British army at home and abroad at a very small cost, while regularity and certainty of issue, as well as careful preparation, were ensured. This result is highly creditable to those entrusted with the management of the establishment.

A PROPOSED SANATORIUM IN SOUTHERN ARABIA.

IN his interesting article on "The Land of Frankincense and Myrrh," in the current number of the *Nineteenth Century*, Mr. Theodore Bent suggests that the Gara Hills, situated not far from the coast of southern Arabia, would form an excellent health resort "for the inhabitants of the burnt-up centres of Arabian commerce, Aden and Muscat." These mountains are 3000 feet in height, and the ground right up to the summits is fertile and covered with grass. Clusters of sycamores give the undulating hills a park-like appearance. "Thus we wandered," he tells us, "with our strange escort for several days along the summit of the Gara Mountains, and from certain points we obtained most interesting *coups d'œil* over the whole of the frankincense country; it is just like an oasis by the sea, an undulating range of mountains, never more than 3000 feet high, separating the central desert of Nejd from the sea....To the east and west the arid barrenness of Arabia soon asserts itself, whereas the undulating Gara range, like the Cotswold, is fertile, and rounded with deep valleys running into it full of rich tropical vegetation." The travellers suffered some inconvenience from cold winds coming from the north, during the prevalence of which their native guides would not allow the camels to move. They found many pleasant wooded dells and running streams which would have been notable anywhere, but which were a marvel as occurring in sandy and barren Arabia. The neighbouring coast is almost uniformly barren and inhospitable, and there are no good harbours. "If ever this tract of country comes into the hands of a civilised nation it will be capable of great and useful development. Supposing the harbour was restored to receive ships of moderate size, the Gara Hills, rich in grass and vegetation, with an ample supply of water and regular rains, and, furthermore, with a most delicious and health-giving air, might be of inestimable value as a granary and health-resort." Aden is one of the most disagreeable and unhealthy of the dependencies of the British Crown, and the possibility of establishing a sanatorium within a few hundred miles of this important military and coaling station is worthy of consideration. Arabia is still to a large extent a *terra incognita*, the difficulties of exploration being even greater than in the case of Africa; but in these days no country is likely to remain permanently closed against the enterprising British explorer.

THE CORRELATION BETWEEN MEAT INSPECTION AND OCULAR CYSTICERCUS IN MAN.

IN the twenty-fifth *compte rendu* of his ophthalmological clinic Dr. Hirschberg gives fresh evidence of the happy influence of meat inspection on the prevalence of ocular cysticercus in mankind. It appears that from 1853 to 1866 Graefe had met with 90 cases of this affection among 80,000 patients suffering from diseases of the eye. From 1869 to 1885 Dr. Hirschberg examined the eyes of 60,000 people also affected with various eye diseases, and in 70 the cysticercus was discovered. From 1853 to 1885 this form of parasitism was met with in the proportion of 1 in every 1000 clinical cases, and in certain years (as in 1876) it was 1 in 420, 1 in 450 (in 1879), and 1 in 800 (in 1877). When the organisation of meat inspection was further perfected these proportions were considerably modified in the course of time, but not immediately. For instance, from 1883 to 1885 the cases of ocular cysticercus were still relatively numerous, but in the four following years (between 1886 and 1889) of 30,000 eye patients only one had this entozoon in the ocular cavity; and among 43,000 who came under his observation from 1890 to 1894 there were but two so affected, and they were strangers to the district. These figures demonstrate that a good system of meat inspection, in suppressing the issue of measly flesh as food for man, has at the same time almost completely abolished a rather frequent source of human ocular parasitism.

FRENCH CENTENARIANS.

OUR contemporary *Le Figaro* makes merry *more suo* regarding persons who have reached the age of 100 years, but at the same time contrives to convey a considerable amount of useful information. Until the last census, of which the results have only just been promulgated, it was impossible to determine accurately the number of patriarchs who had enjoyed the pleasures of life for a century and upwards. Once they have passed a certain limit old people get into the way of coquetting about their ages, just as though they were so many ripe dames anxious to post-date the period of their entry into the world, and until registration became firmly established a good deal of trickery in this respect used to be possible. This time, however, the exhibition of snowy locks was not looked upon as a sufficient proof of antiquity, and all aspirants to centennial honours were required to furnish substantial evidence in support of their claims. It seems that in France at the date of the census there were no fewer than 213 genuine centenarians, of whom 147 belonged to the female sex and only 66, or less than half, to the male. Thirty-three of the ladies, being celibate, were justly entitled to be called old maids, whereas the old bachelors only numbered 11. Widows and widowers accounted for 102 and 39 respectively, a discrepancy which *Le Figaro* makes use of as indicating the superior tenderness of the masculine heart, unable, like the turtle-dove, to survive

the demise of its partner. Sixteen males and 11 females were still blessed with loving spouses, but we are not told whether in any case husband and wife had both reached their century. Finally, one lady is a divorcée, and apparently attained to that condition since she became a centenarian. "Never," exclaims the writer in a paroxysm of mock-heroic virtue—"never could a man be found sufficiently hard-hearted after 100 years to endeavour to strike a balance with his bride after that fashion."

MUNICIPAL CORPORATIONS AND MEDICAL CERTIFICATES.

WE see it announced that at the meeting of the Association of Municipal Corporations, now being held in London, among other resolutions to be considered is one for the abolition or reduction of payment to medical men for certificates issued under the Infectious Disease (Notification) Act, 1889. We are curious to hear on what grounds their resolution is going to be supported. Is it that the proposer finds the Act vicious in its working, and so the certificates unnecessary? If so, he will have some rather awkward evidence against him to surmount. Or is it that he thinks medical men should work for nothing? If so, he will have to give reasons for holding that our profession should be exempt from the business conditions universally prevailing.

THE NEW ENTRIES AT THE MEDICAL SCHOOLS.

OUR statistical returns of the students who have entered upon a course of medical study at the London and provincial medical schools are not yet complete and we must hold over our analysis of the figures for a future issue of THE LANCET. Up to the present time 187 new students have entered at St. Bartholomew's Hospital, 83 at Charing-cross Hospital, 55 at St. George's Hospital, 184 at Guy's Hospital, 112 at King's College, 138 at London Hospital, 158 at St. Mary's Hospital, and 203 at University College Hospital. At the provincial schools there have been 28 new entries at University College, Bristol; 91 at Mason College, Birmingham; 59 at University College, Cardiff; 17 at Yorkshire College, Leeds; and 16 at the Sheffield Medical College. It will be seen that the list is by no means complete, and the figures when analysed later will require considerable explanation.

TYPHOID FEVER BACILLI IN DRINKING-WATER.

IT is now generally admitted that drinking-water is often the vehicle of infection in typhoid fever. The exact conditions that befriend or antagonise the specific germ in water have naturally been made the object of study by many investigators. These studies, however, have led in many cases to results so conflicting, and have been based in general on methods and material so diverse, that the chief outcome has been confusion. A paper on this subject entitled "On some Conditions affecting the Behaviour of the Typhoid Bacillus in Water" appears in the *Philadelphia Medical News* of Sept. 28th from the pen of Dr. E. O. Jordan of Chicago. The nature of the experiments is carefully given. Without going further into detail we here give the general results arrived at by Dr. Jordan. 1. The age of the typhoid fever stock influences greatly the life of the bacilli introduced into water, a freshly isolated stock possessing distinctly greater vitality than one that has been under cultivation for some months. 2. The typhoid fever bacillus, when introduced with proper precautions into sterilised Lake Michigan water, does not multiply, but may, under certain conditions, maintain its vitality for upwards of ninety-three days. 3. The colon bacillus, on the contrary, under similar conditions, undergoes rapid multiplication and may remain alive for upwards of 282 days. 4. In redistilled water the typhoid fever bacillus perishes much more speedily than in the water of the lake. 5. The quantity of organic matter (peptone) in redistilled water influences fundamentally the life of the typhoid fever bacillus, so small an increment as 0·0126 organic nitrogen (part per 100,000) causing a perceptible lengthening of life. 6. In sterilised lake water the addition of a still smaller quantity of organic nitrogen—0·0012—affects the longevity of the typhoid fever bacilli introduced.

THE ADMINISTRATION OF THE FOOD AND DRUGS ACT AT BRISTOL.

AT the last meeting of the Bristol Town Council the following resolution was moved: "That the administration of Food and Drug Acts be entrusted to the Sanitary Committee." It was stated that at present this power is in the hands of the watch committee and police, and that Bristol was the only city in the kingdom where the Act was administered by the police, but that almost invariably it was in the hands of the health committee of the Corporation. It was admitted that the police and the chief constable were in favour of the transfer. A member of the council remarked that during his connexion with the watch committee he had never heard any member ask that any single article should be examined. The objection, according to one speaker, was that the sanitary committee was a spending committee, and that it would appoint paid inspectors to carry out the working of the Act. Unfortunately the resolution was defeated, and consequently the power is still in the hands of the police. Bristol should certainly follow the example of other towns, and place this authority in the hands of the sanitary committee, as this is the most suitable body to select articles which have to be examined and analysed.

THE WEATHER AND DISEASE.

POETS and writers in all ages have made reference to the effects which changes of the weather produce in the human organism, and the archives of folk-lore would furnish much evidence that these effects have not passed unnoticed by the proletariat. Unfortunately, however, the subject has been adulterated with a great deal of superstition, which has in a great measure tended to retard intelligent inquiry. That the various atmospheric changes should have some effect upon our bodies is easily understood, for we know that alteration in the surface temperature, a change in the blood pressure or in the air pressure of the lungs, may affect the nervous system, and all these changes may be brought about by some peculiarity of the natural phenomena which we call weather. In recent years the subject has attracted attention by those most competent to deal with the matter, and lately a meteorological station has been attached to the laboratories of the Public Health Department at Rome, where lectures are given to students on the application of meteorology to hygiene. At present our knowledge of the way in which the weather acts upon the body is very limited, and must remain so until a larger number of data are collected. An attempt to trace the relation between weather and disease has recently been made by a Fellow of the Royal Meteorological Society[1] by bringing together a number of statistics dealing with the phenomena of the weather and some well-known diseases, chiefly zymotic, presenting them by a graphic method in a systematic manner. Little attempt has been made to draw conclusions from these statistics, and until they have been digested by many minds perhaps the writer was wise in his omission. There are few people who could not give instances of the influence which the weather has upon them either mentally or

[1] Weather and Disease: a Curve History of their Variations in Recent Years. By Alex. B. MacDowall, M.A., F.R.Met.S. (The Graphotone Co., London, E.C. Price 2s. 6d.)

physically, and there are many medical men (who in other directions have no opportunity for original research) who might do some useful work by recording the result of their observations on the subject, and thus add considerably to our knowledge of the *rôle* which is played by the weather in the causation or prevention of disease. On some constitutions the seasons have a marked influence. With many the spring, with its bright days and clear air, is felt to be the time of the year when they get the most enjoyment from life; while others, probably of a more sensitive temperament, experience the greatest sum of happiness and health when peaceful autumn wraps them in its serene atmosphere. On the other hand, winter or summer, as the case may be, produces in other temperaments the greatest consummation of healthy vitality. Certain changes in the weather, too, tend to increase or diminish the amount of energy that we put into our daily work, and it has been stated that in a large factory from 10 to 20 per cent. less work is done on dull days and days of threatening storm. The whole subject is one which, pursued in a proper scientific spirit, should be productive of useful results.

SOME EXPERIMENTS WITH TEA.

DR. MCKECHNIE of Talawakela, Colombo, has been making some investigations as regards the action of tea on the digestive organs. He publishes a short paper on the subject in the *Philadelphia Medical News* of July 27th. The trial experiments were carried on with test-tubes, a digestive fluid being prepared by making a glycerol extract of pepsin. The aliment employed consisted of beef fibre and egg albumen. Measured quantities of each were used, and to six test-tubes containing the meat fibre were added the glycerol extract and hydrochloric acid, and also a measured quantity of tea, different lengths of time being allowed for each infusion, varying from five to twenty minutes. A seventh tube was used to fix the time required for the digestion of the meat fibre alone, which proved to be about 110 minutes. With the tea added to the other test-tubes the time required for the digestion of an infusion of twenty minutes was the same as with one of five minutes—namely, 118·5 minutes. Another experiment was made on the same basis, but with the tannic acid precipitated by means of a gelatine solution. The result of this showed no appreciable difference in the time taken to digest that with tannic acid and that without tannic acid. The experiments were carried still further by means of a gastric fistula formed in a monkey's stomach. It was found on introducing the ingesta by the mouth that digestion was retarded about five minutes longer than when the ingesta and the tea were introduced through the mouth and the fistula respectively, thus showing that the tea exerted an inhibitory influence upon the salivary glands. When the tannic acid was precipitated and introduced in the same manner there was no difference in the time occupied in the digestion of the tea without tannic acid by the mouth as compared with that by the fistula, but there was an appreciable difference on the introduction of an infusion of twenty minutes without tannic acid as compared with an infusion of five minutes with the tannic acid removed. The peristaltic action was retarded, and the secretion of gastric juice diminished. Dr. McKechnie is of opinion that the tannic acid in the tea is not the injurious agent, but that the injury is caused by some of the less soluble extractive matters. From the results of his observations he is inclined to think that the action of tea is not so injurious as some writers think it to be. It greatly depends on the method of infusing whether its action is injurious or not. Long-infused teas seem to extract some substance, possibly an alkaloid, that has an inhibitory action on the nerves of the stomach. Dr. McKechnie also states that an infusion of tea of twenty minutes with the tannic acid precipitated has a similar bitter taste as the same tea with the tannic acid present, so that the bitterness in long-infused tea seems not to be due to the tannic acid, but to some other ingredient.

ALCOHOLIC NEURITIS IN OLD AGE.

IN the last number of *Brain* Dr. Maude publishes a brief account of a most interesting case. The patient, who was a robust country gentleman of sporting habits and used to an out-of-door life, had taken stimulants in considerable excess for at least twenty years. Even eighteen years ago no unusual daily allowance was half a gallon of beer, a bottle of sherry, and eight or ten liqueur glasses of "neat" whisky. His favourite drink was beer, and even in the summer of 1894, although over seventy-five years old, he would often consume two quarts of beer, a bottle of sherry, and half a bottle of whisky in a day. He had had no serious illnesses except broken bones from riding accidents and a fractured humerus at the age of seventy-three from a fall downstairs one evening after dinner. During the year 1894 his great muscular power became much impaired, and towards the end of the year he began to complain of severe darting pains in the left lower limb. A few weeks later the hands and feet began to swell rather suddenly, the skin became thin and glossy, while there were small ecchymoses over it. A similar condition was present on the insteps of both feet, while the calves and thighs were œdematous and the muscles shrunken. The knee-jerk could not be elicited, and the pupils were small and did not react to light. The heart sounds were somewhat feeble, but they were regular and there was no sign of dilatation. Without any previous marked change in his symptoms he died suddenly after a few minutes' dyspnœa about two months after the onset of the symptoms. Dr. Maude considers the case to have been one of peripheral neuritis, and directs attention to several interesting points, such as the advanced age of the patient, the excess of his alcoholic indulgence, and the absence of mental change; the fact also that he was essentially a beer-drinker is interesting, with reference especially to the views of the late Dr. James Ross as to the kind of alcoholic beverage most likely to produce neuritis.

LESIONS OF THE SPINAL CORD IN PERNICIOUS ANÆMIA.

A VALUABLE contribution to this subject appears in the *University Medical Magazine*, No. 7, 1895, by Dr. C. W. Burr. The study is based upon seven cases of pernicious anæmia, in addition to other cases of profound simple anæmia. Dr. Burr is of opinion that his cases prove that the coexistence of pernicious anæmia and certain lesions of the cord is not accidental. The cord was normal in only one of seven succcessive cases. The localisation of the lesion is fairly characteristic and constant. The cervical swelling is always the seat of the most marked alteration, and the lesion progressively decreases in intensity and extent at lower levels of the cord, till in the lumbar region there is either no disease at all or it is extremely slight. The only parts of the cord affected are the posterior columns, the lateral columns in or near the crossed pyramidal tracts, the direct pyramidal tracts, and (rarely) a band running forward along the circumference of the cord (direct cerebellar tracts). The grey matter is never affected seriously and rarely even slightly. The degeneration of the posterior peripheral roots, when present, is ordinarily so slight as to be of no importance. In the greater number of cases there is marked posterior degeneration with some, but much less marked, degeneration of the lateral columns in and around the crossed pyramidal tracts. The

posterior columns may be affected alone, but the lateral never alone. Almost invariably there is a band of normal white tissue separating the diseased area in the posterior columns from the grey matter. Not very rarely there are two distinct areas of degeneration in the posterior columns in the cervical region — one in the postero-internal and the other in the postero-external column, the two being separated by a band of normal or almost normal white matter. In the lower dorsal and lumbar cord the most frequent seat is midway between the posterior median longitudinal fissure or septum and the posterior grey matter. Almost always there is normal white matter between the posterior horn and the diseased area in the lateral columns. The lesion is always symmetrical in the two halves of the cord, often absolutely so, but sometimes descending further on one side than on the other.

TYPHOID FEVER AT LUTON.

THE epidemic of typhoid fever now existing at Luton does not present the town in a very satisfactory light either as regards general hygiene or hospital accommodation. The cases have, with few exceptions, occurred in the east ward of the town, and so to a large extent have fallen under the direct superintendence of one medical officer who looks after the poor of this ward. Dr. McArthur, who is in charge of this ward, does not think the epidemic is in any way due to the water-supply, as some of the houses were supplied by the water company and others were not; but he thinks in many ways that the sanitation of this part of the town is in a very bad state, and under the circumstances it is hardly possible to think otherwise. Dr. McArthur has made several statements of the defects which he considers to exist in the sanitation and has asked for an investigation to be made by some impartial person which would satisfactorily clear up the subject. With regard to the hospital accommodation for infectious diseases it proves to be absurdly inadequate. There is a building which contains *one* ward and five beds in all, and this to serve a town of something like 30,000 people! And yet over £700 have been spent on it. The authorities are at present utilising hospital tents for the patients. The inadequacy of the accommodation has before been pointed out by people competent to judge; but now that its uselessness has been proved it is to be hoped that the sanitary officers will take some steps to get it altered. The best thing that could happen would be to have the whole matter sifted by a Local Government Board inquiry and so to ascertain the bare facts of the case. We fully agree with the opinions of the local press that the matter should not in any case be treated as a "scare" and then allowed to drop; where such a number of cases occur in a small area and where accommodation is so defective there must necessarily be defects which require the fullest and most impartial examination.

THE Paris correspondent of the *Times* announces that M. Duclaux has been unanimously chosen to succeed the late M. Pasteur as Director of the Pasteur Institute, while Dr. Roux is the subdirector. These are the appointments that were generally anticipated.

IT is now understood that the alterations in the premises of the General Medical Council cannot be completed in time for the November meeting, which will probably be held elsewhere.

THE first Hunterian Society's lecture will be delivered at the London Institution by Dr. Sims Woodhead. The title of the lecture will be "The Probable Limitations of Serum Therapy."

AT the opening meeting of the Session of the Clinical Society of London (Oct. 11th) the President, Dr. Buzzard, was unfortunately prevented from being present. Consequently his inaugural address will be delivered at the second meeting, which will be held on Friday, Oct. 25th, at 20, Hanover-square.

INOCULATIONS AGAINST CHOLERA IN INDIA.

THE results obtained from the inoculations performed in India either by M. Haffkine or by others according to his method are of interest and importance in several directions. The effect of the discovery of an inoculation protective against cholera would be far-reaching enough, and might in time effect as striking a reduction of the disease in countries where it is endemic as vaccination has done in the case of small-pox in Europe. And from the scientific standpoint, if inoculations after M. Haffkine's method should prove to be thus protective against cholera, we shall have found an infectious disease where the pathogenic organism, intensified to its maximum by progressive inoculation into lower animals, can give protection to man when inoculated in minimal doses. This experience would doubtless be applicable to other diseases; and the possibilities for preventive medicine suggested by the success of the method would be all the greater now that it has been shown that divers other organisms besides the cholera vibrio when injected into experimental animals after M. Haffkine's method can produce in them an immunity against subsequent fatal doses of the cholera vibrio.

It is well known that anti-cholera inoculation has been subjected to extensive trials in India, and a summary of the results obtained during the last two years is now published by Dr. Simpson, the health officer of Calcutta, in a recent document addressed to the chairman of the Calcutta corporation. These results may be classified as—(1) the experience of epidemics of cholera that have occurred in different parts of the country among communities containing inoculated persons; (2) the general experience of Calcutta; and (3) that of certain tea gardens in Assam. As regards the first of these, undoubtedly the most important was the epidemic of October, 1894, in the East Lancashire Regiment at Lucknow. In this regiment inoculated and uninoculated appear to have been under identical conditions in all respects. Out of 133 inoculated there were 18 cases of cholera and 13 deaths, while among 640 not inoculated there were 120 cases and 79 deaths; or, in other words, the attack-rate was over 15 per cent. for inoculated and over 18 per cent. for uninoculated, a difference which, having regard to the numbers concerned, cannot be said to be of much significance. In this instance the inoculations had been performed by M. Haffkine fourteen or fifteen months previously with, it has been explained, a weaker virus than it is now customary to use. It is noteworthy, however, that the case mortality was actually larger in the inoculated than in the uninoculated class—a fact which hardly suggests that even a partial protection was here exerted. Among the troops at Cawnpore 19 cases of cholera occurred among 797 uninoculated, and none among 75 inoculated thirteen months before; but, with this exception, the Lucknow epidemic has been the only outbreak of any magnitude available to test the behaviour of cholera in the cases of those who had been inoculated some time previously. The other outbreaks recorded by Dr. Simpson are those in which inoculation has been performed after cholera has actually made its appearance. In the Manchester Regiment at Dinapore 13 cases of cholera with 9 deaths occurred. A considerable number of men were then inoculated, in all 193, and among those there were no further attacks. Among 729 remaining uninoculated there were 6 attacks with 3 deaths. At the Gya Gaol inoculations were performed during the progress of an epidemic and after 6 cases and 5 deaths had occurred. Half the prisoners were inoculated, the remainder being left

not inoculated. The incidence of the disease on the two groups was as follows:—

—	Not inoculated.		Inoculated.	
	Cases.	Deaths.	Cases.	Deaths.
During first five days after first inoculation...	7	5	5	4
During three days after second inoculation	5	3	3	1
After eight days from first inoculation	8	2	—	—
Totals	20	10	8	5

In these two instances some protection would appear to have been afforded, but it may be borne in mind that by the time the inoculations could have begun to exert a protective effect (admittedly five days or more) the disease was on the wane and was showing its decreased virulence by a diminished fatality.

A series of observations under somewhat different circumstances is recorded by Dr. Simpson for Calcutta. The number of natives inoculated in this city since 1893 has been over 4000, comprising Hindoos, Mohammedans, and a few Europeans, of all ages and both sexes. In certain houses where these inoculated people live cholera has since appeared at one or another time, and Dr. Simpson's plan has been to determine for each house so attacked the incidence on inoculated and uninoculated respectively. The disease invaded 36 houses containing between them 516 persons—181 inoculated and 335 not. Among the former 4 cases (all fatal) occurred, or 2·2 per cent.; among the latter 45 cases (with 35 deaths), or 13·4 per cent. Further, when those houses are deducted in which the inoculations had been performed less than eight days before cholera appeared we find a single attack only among 140 inoculated, while those among 265 inoculated were 39, or 14 per cent. Several noteworthy cases occur in the list. Thus: "In Rhamdone Dutt's house at Katalbagan Custee 6 persons out of 8 were inoculated in March, 1894, and fatal cholera entered the house in the following April and attacked *one of the two not inoculated*, leaving the 6 inoculated unaffected. In the house of Baboo Banikanta Mookerjee, Shibpore, 6 members of a family of 7 were inoculated in July, 1894. In March of 1895 *the only one not inoculated* was affected with cholera and died, the inoculated remaining quite well."

The test here applied is clearly less exact than that of the Lucknow outbreak, where the mode of living and the conditions of exposure may be assumed to have been fairly equal in all cases. Calcutta has been the home of sporadic cholera for generations; the opportunities of infection met with by the native population must be so many and diverse that it can hardly be assumed that in any given house affected all the inhabitants have been equally exposed to cholera infection; and, even so, other factors besides inoculation must almost certainly have been concerned with the escape of particular members of the household. Nevertheless, no great difference in exposure or susceptibility can be assumed when the totals of inoculated and uninoculated are taken, and the immunity of the former class, as far as these figures go, is sufficiently striking. One point may be commented on. If the effect of M. Haffkine's injections presents any analogy to the protection of vaccination against small-pox we should expect to find certain partly protected persons among the inoculated class in whom cholera manifests itself in a mild or modified form. The reverse has been the case, however, for of the 4 cases recorded in this class all were fatal.

In 42 inoculated cases the interval between the date of inoculation and the appearance of cholera in the house was a twelvemonth or more. One case of cholera occurred among these 42, while the 3 other inoculated persons affected were attacked, as we have seen, less than eight days after the operation. In this connexion the third series of observations recorded by Dr. Simpson may be referred to; they are the results obtained in certain tea gardens in Assam, where up to the present inoculations have been performed only with the preliminary "first vaccine" employed by M. Haffkine. Here, as in Calcutta, the incidence of sporadic cholera as it has affected inoculated and uninoculated has been observed. Collecting the cases which have occurred at one or another time in the last few months in seven of these gardens, Dr. Simpson gives us the following figures:—

Total of Uninoculated on all the Affected Gardens.[1]

			Percentage.	
In the whole population ...	5222	had 38 cases	0·73	19 deaths.
In the affected lines	374		10·16	
In the affected houses... ...	95		40·00	

Total of Inoculated on all the Affected Gardens.

			Percentage.	
In the whole population ...	2741	had 5 cases	0·18	3 deaths.
In the affected lines	369		1·36	
In the affected houses... ...	40		12·50	

It is clear that these several experiences in India, extensive as they are, have not yet been sufficient to settle the value of anti-cholera inoculation. On the one hand, the indications afforded by the Assam figures are that even the preliminary inoculations have considerable protective power, and by the Calcutta figures that the power of completed inoculation has held good for twelve months or more. On the other hand, there is the almost complete failure of any protection to the East Lancashire Regiment under circumstances better fitted for exact experiment. Clearly more facts are needed, and we are glad to see that Dr. Simpson proposes to proceed further with the arduous investigation he is now identified with. It may be assumed, we trust, that, in view of the important issues involved, the Calcutta corporation has by now sanctioned the very modest expenditure which Dr. Simpson asks for this purpose.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY meeting of the Council was held on the 10th inst., the President, Mr. Christopher Heath, being in the chair.

The best thanks of the Council were given to Mrs. Hulke for her presentation to the College of the Series of Drawings of Malignant and other Tumours collected by the late Mr. J. W. Hulke. Mr. Tweedy received a vote of thanks for his presentation to the Library of a manuscript by Archile de Verona, entitled "De Dolore Juncturarum."

The Draft Report, which is to be presented to the Fellows and Members at the meeting to be held on Nov. 7th next, was approved and adopted.

The following report from the Committee of Management was approved and adopted, viz.:—

1. That the following institutions be added to the list of recognised places of instruction in chemistry, physics, and practical chemistry and biology: (*a*) the University College of North Wales, Bangor; (*b*) Wyggeston School, Leicester; (*c*) Victoria Institute, Worcester (without biology).

2 That the National Hospital for the Paralysed and Epileptic, Queen-square, Bloomsbury, be recognised as a place of study during the fifth year of the curriculum.

Mr. Christopher Heath was reappointed a member of the Committee of Management.

A report, dated the 4th inst., from the Laboratories Committee was approved and adopted; the report was as follows:—

1. *The Work in Diphtheria for the Metropolitan Asylums Board.*—(*a*) Examination of material for diagnosis. Since June 7th 4634 specimens have been examined and reported upon. The average number of specimens examined per diem has been 45. (*b*) The preparation of antitoxin serum. Since Sept. 1st the Director has supplied about 700 doses of antitoxin serum for the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board, and he hopes to be able to meet all the demands of the hospitals, which are, however, somewhat greater than was anticipated.

2. *The Goldsmiths' Company's Grant for Researches on the Antitoxin Treatment of Diphtheria, &c.*—The Committee, on the recommendation of the Director, have granted £100 from this fund to Dr. Cartwright Wood, who is carrying on investigations as to improved means of treating the horses with a view to obtaining the serum in a shorter time than is possible by the methods hitherto in use.

Mr. Howse was re-elected a member of the Laboratories Committee.

The Royal College of Physicians of London was invited to appoint six delegates to confer with a like number appointed by the Royal College of Surgeons on the question of the examinations under the five years' curriculum.

[1] Exclusive of 19 cases, with 11 deaths, in recently arrived uninoculated coolies, and 11 cases, with 5 deaths, among old uninoculated coolies regarding which returns had not been received.

CHOLERA.

THE most important item of news in regard to this disease is that which comes from Alexandria through Reuter's agency regarding a localised outbreak of cholera at Damietta. It appears that 16 cases and 9 deaths had occurred up to the 15th inst., but the disease is reported to be of mild type. The nature of the disease was, it is stated, conclusively proved by bacteriological examination. It will be remembered that it was at Damietta that cholera first appeared in the last epidemic in Egypt.

The official returns published at St. Petersburg on the 13th inst. show that for the fortnight ending Sept. 28th there occurred 4249 cases of cholera and 1701 deaths in the province of Volkymia. In the district of Berditcheff (Kieff) 57 cases and 21 deaths occurred, and in the province of Podolia 37 cases and 18 deaths. From Sept. 29th to the 5th inst. no further cases of cholera had been reported in Podolia. It may, we think, be assumed from the foregoing returns and the lateness of the season that there will soon be a still further decrease in the number of cases, and that we may hope to hear of the disappearance of the epidemic in Russia, or, at any rate, of such a reduction in the number of attacks as to render the publication of official returns no longer necessary.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6492 births and 4271 deaths were registered during the week ending Oct. 12th. The annual rate of mortality in these towns, which had been 21·0 and 19·4 per 1000 in the two preceding weeks, rose again last week to 21·0. In London the rate was 17·0 per 1000, while it averaged 23·9 in the thirty-two provincial towns. The lowest rates in these towns were 8·6 in Croydon, 13·4 in West Ham, 15·8 in Plymouth, and 16·7 in Bristol; the highest rates were 28·8 in Gateshead, 31·7 in Liverpool, 33·6 in Salford, 34·0 in Burnley, and 42·5 in Blackburn. The 4271 deaths included 895 which were referred to the principal zymotic diseases, against 920 and 871 in the two preceding weeks; of these, 533 resulted from diarrhœa, 94 from measles, 35 from diphtheria, 65 from "fever" (principally enteric), 60 from scarlet fever, 56 from whooping-cough, and 2 from small-pox. The lowest death-rates from these diseases were recorded in Plymouth, Croydon, Bristol, and Birkenhead; and the highest rates in Preston, Wolverhampton, Burnley, Salford, and Blackburn. The greatest mortality from measles occurred in Salford, Oldham, Wolverhampton, and Blackburn; from scarlet fever in Liverpool and Salford; from whooping-cough in Salford, Gateshead, and Bolton; from "fever" in Birkenhead and Sunderland; and from diarrhœa in Hull, Preston, Salford, Burnley, and Blackburn. The 85 deaths from diphtheria included 56 in London, 7 in West Ham, 6 in Birmingham, 4 in Liverpool, and 3 in Leeds. Two fatal cases of small-pox were registered in London, but not one in any other of the thirty-three large towns. There were 158 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 12th inst., against 271, 234, and 198 at the end of the three preceding weeks; 9 new cases were admitted during the week, against 23, 21, and 17 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2827, against 2732, 2807, and 2802 on the three preceding Saturdays; 332 new cases were admitted during the week, against 344, 339, and 252 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 173 and 158 in the two preceding weeks, rose again to 175 last week, but were 92 below the corrected average. The causes of 55, or 1·3 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, and in eight other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·5 and 18·3 per 1000 in the two preceding weeks, rose again to 19·3 during the week ending Oct. 12th, but was 1·7 per 1000 below the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·4 in Aberdeen and 15·7 in Leith to 26·0 in Greenock and 27·9 in Dundee. The 558 deaths in these towns included 58 which were referred to diarrhœa, 11 to whooping-cough, 8 to "fever," 7 to scarlet fever, 5 to measles, 5 to diphtheria, and not one to small-pox. In all, 94 deaths resulted from these principal zymotic diseases, against 79 and 96 in the two preceding weeks. These 94 deaths were equal to an annual rate of 3·3 per 1000, which was 1·1 below the mean rate last week from the same diseases in the thirty-three large English towns. The deaths from diarrhœa, which had been 48 and 62 in the two preceding weeks, declined again to 58 last week, of which 22 occurred in Glasgow, 11 in Edinburgh, 11 in Dundee, and 8 in Greenock. The 11 fatal cases of whooping-cough showed a decline of 6 from the number in the preceding week, and included 5 in Glasgow and 4 in Dundee. The deaths referred to different forms of "fever," which had been 16, 6, and 8 in the three preceding weeks, were again 8 last week, of which 2 occurred in Glasgow, 2 in Edinburgh, and 2 in Dundee. The fatal cases of scarlet fever, which had been 5 and 4 in the two preceding weeks, rose again to 7 last week, of which 3 occurred in Glasgow and 3 in Edinburgh. The deaths from diphtheria, which had been 5 and 2 in the two preceding weeks, rose again to 5 last week, and included 2 in Dundee. The deaths referred to diseases of the respiratory organs in these towns, which had been 82 and 98 in the two preceding weeks, were 97 last week, and slightly exceeded the number in the corresponding week of last year. The causes of 27, or nearly 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·8 and 21·3 per 1000 in the two preceding weeks, rose again to 26·8 during the week ending Oct. 12th. During the thirteen weeks of last quarter the death-rate in the city averaged 23·4 per 1000, the rate during the same period being 18·6 in London and 16·5 in Edinburgh. The 180 deaths registered in Dublin during the week under notice showed an increase of 37 upon the number in the preceding week, and included 29 which were referred to the principal zymotic diseases, against 24 and 12 in the two preceding weeks; of these, 17 resulted from diarrhœa, 6 from "fever," 3 from whooping-cough, 1 from small-pox, 1 from scarlet fever, and 1 from diphtheria. These 29 deaths were equal to an annual rate of 4·3 per 1000, the zymotic death-rate during the same period being 2·8 in London and 3·4 in Edinburgh. The fatal cases of diarrhœa, which had been 13 and 8 in the two preceding weeks, rose again to 17 last week. The 6 deaths referred to different forms of "fever," exceeded the number recorded in any week since December last. The mortality from whooping-cough also showed an increase, while that from scarlet fever showed a decline from that recorded in recent weeks. The 180 deaths in Dublin last week included 43 of infants under one year of age, and 38 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons considerably exceeded those returned in the preceding week. Four inquest cases and 9 deaths from violence were registered; and 55, or more than a fourth, of the deaths occurred in public institutions. The causes of 19, or more than 15 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF THE MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL MATURIN has arrived fom Ceylon and will be succeeded by Brigade-Surgeon-Lieutenant-Colonel Duke. Brigade-Surgeon-Lieutenant-Colonel Williams has embarked for Jamaica. Surgeon-Major Peterkin and Surgeon-Major Rhodes have embarked for India in the *Dilwara*. Surgeon-Lieutenant-Colonel Bourke has been transferred from Cork to York. Surgeon-Captain

Ritchie has arrived from Malta, and Surgeon-Captain Kennedy has arrived in that Command. Surgeon-Captain Lane has embarked for Singapore. Surgeon-Captain M. L. Hearn proceeds to Singapore for a four years' tour of duty in the Straits Settlements.

ARMY MEDICAL STAFF.

Surgeon-Major-General Robert Lewer is placed on retired pay. The under-mentioned surgeon-majors to be surgeon-lieutenant-colonels:—William M. James and Ernest H. Fenn, C.I.E. Surgeon-Captain Patrick B. Skerrett retires from the Service receiving a gratuity.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Lieutenant-Colonel F. C. Barker is appointed to be Presidency Marine Surgeon, Second District, Bombay. Surgeon-Lieutenant-Colonel J. McCloghry to be Medical Officer to the Kathiawar Political Agency and in Charge of the West Hospital, Rajkete. Brigade-Surgeon-Lieutenant-Colonel H. T. Brown, A.M.S., to officiate on the Administrative Medical Staff of the Army, with the temporary rank of Surgeon-Colonel, vice Surgeon-Colonel T. Maunsell, Principal Medical Officer, Rawalpindi District, appointed Principal Medical Officer, Chitral Relief Force. The following transfers of officers of the Army Medical Staff serving in the Bombay Command are ordered:—Brigade-Surgeon-Lieutenant-Colonel Saunderson from Quetta to Mhow District; Surgeon-Major MacNeece from Deesa District to Poona District; Surgeon-Major Gogging from Mhow District to Deesa District; Surgeon-Major Parker from Deesa District to Aden District; Surgeon-Major Banes from Poona District to Aden District; and Surgeon-Captain Parry from Poona District to Bombay District. Surgeon-Lieutenant Kilkelly is transferred from the Nagpore to the Poona District, and is appointed to the Officiating Medical Charge of the 28th Bombay Infantry. Brigade-Surgeon-Lieutenant-Colonel S. O'Brien Banks is promoted to Surgeon-Colonel in the Bombay Service.

NAVAL MEDICAL SERVICE.

Surgeon George T. Collingwood has been appointed to the *Pembroke*.

VOLUNTEER CORPS.

Artillery: 1st North Riding of Yorkshire (Western Division, Royal Artillery): Surgeon-Major T. R. Pearson, M.D., to be Surgeon-Lieutenant-Colonel. *Royal Engineers:* 1st Cheshire: Captain J. F. Blake-Campbell is appointed Surgeon-Lieutenant. *Rifle:* 2nd (Berwickshire) Volunteer Battalion the King's Own Scottish Borderers: Surgeon-Captain J. Denholm, M.B., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement.

THE MADAGASCAR EXPEDITION.

The intelligence of the capture of the capital of Madagascar by General Duchesne's force, although incorrect as to the date and in other particulars, has since been officially corroborated, and the French Government is to be congratulated on the fact. Notwithstanding that there may have been mistakes in the campaign, and that the arrangements generally—and the sanitary arrangements in particular—were very far from perfect, the expedition was confessedly a very difficult one, and the operations are most creditable to the pluck and perseverance of the French army and the ability of its general. The history of the expedition, when it comes to be written, will be an interesting and instructive one. It is probable that a comparatively small force will now be kept in the country and at Antananarivo. We are glad to learn that active measures are being taken in France to secure the comfort and well-being of the invalid soldiers on their way home by giving a larger amount of accommodation to the sick and convalescents on board the transports, with plenty of fresh and wholesome food. The hospitals and sanatoria in Algiers are prepared for the reception of invalids. Telegraphic intelligence from Port Said reports the arrival there of the French troopship *Canton* on the 12th inst. with a number of sick troops from Madagascar. Over fifty men are reported to have succumbed during the voyage to Suez, and some have since died and been buried at Ismalia. The French Madagascan expedition will, we suspect, prove to have caused a very considerable expenditure of life and money.

THE CHITRAL DISPATCHES.

A telegram from Simla gives a nominal list of the officers mentioned in General Sir R. Low's dispatches for services in connexion with his force. We are glad to notice the names of several medical officers. Surgeon-Lieutenant Sutherland's services are mentioned for the action at Panjkova on April 13th; Surgeon-Colonel T. Maunsell, Surgeon-Colonel Thomson, Surgeon-Lieutenant-Colonels Donovan, O'Connor, and Simmons, and Surgeon-Major Coutts are also mentioned in the General's dispatches, and we congratulate those officers and the medical services on the part they took in the late expedition. The total casualties in General Low's column in the several actions in April last were: 2 officers killed and 13 wounded, 19 non-commissioned officers and men killed and 88 wounded, and 5 followers killed; total, 127.

DEATHS IN THE SERVICES.

Deputy-Surgeon-General R. W. Cockerill (retired) on Oct. 8th. He served in the Crimea, and was present at Inkermann and at Sebastopol, where he was wounded (Crimean and Turkish medals). He served through the China campaign of 1857–59, receiving the Chinese medal for his services. In 1869 he was appointed to a professorship in the Madras General Hospital and Medical College. He retired in 1885.

Deputy-Inspector-General J. C. Messer (retired), R.N., on Oct. 9th, at his residence in Edinburgh. He was appointed surgeon in 1852, staff-surgeon in 1861, and fleet-surgeon in 1874. He served in the Baltic Expeditions of 1854–55 (Baltic medal) and retired in 1885.

THE ARMY MEDICAL SERVICE.

The *Pall Mall Gazette* of the 15th inst., under the head of "Service Notes," contains a very trenchant paragraph as to the contemplated reform and reorganisation of the Army Medical Department, which, it says, rumour has it, will be inaugurated under the new Commander-in-Chief. Our contemporary, while disclaiming all intention of reflecting "on the courage, skill, and devotion of our army doctors, of whom, as a whole, we may well be proud," goes on to add that the department is run from top to bottom on a muddle-headed want of system which calls for inquiry and remedy.

THE FRENCH MILITARY MEDICAL SERVICE.

A number of military surgeons were nominated in a recent gazette as commanders, officers, and knights of the Legion of Honour. It is announced that the autonomy given to the medical corps is about to be revised, and that an attempt will be made to modify or cancel the powers vested in medical officers by the law of March, 1882. But this, it is to be remarked, is only a rumour, to which we have already referred.

Correspondence.

"Audi alteram partem."

ELEMENTARY EXAMINATIONS IN ANATOMY.

To the Editors of THE LANCET.

SIRS,—Is the elementary examination in anatomy as at present conducted by the Royal College of Surgeons of England a desirable one? This is a question which is best answered by a study of the requirements of that examination. The student who presents himself for this examination is required to show a knowledge of osteology and to have spent six months in acquiring that knowledge. He is not required to know anything of the soft parts, nor is he supposed necessarily to have done any dissection; at all events, he is not required to present any certificate to the effect that he has dissected. He is, in short, required to have a knowledge of the bones of the body, and he is allowed six months to acquire that knowledge. Now what is the effect of this on the average student? He knows that any student of reasonable intelligence can get up the work for this examination in three months. His teacher is able by lecturing, say, three times a week to get over the ground covered by osteology in three months—by Christmas in a winter session—after which he perhaps lectures on the ligaments and muscles of the body and any other systems that time allows him. The student faithfully takes notes of the lectures on osteology, but does he trouble to read them? No. As he knows that anyone with any intelligence at all can acquire enough knowledge in three months to satisfy the

examiners in this examination he leaves his reading for the latter three months of the winter session. He goes on attending the lectures on ligaments and muscles, &c. if he is compelled to do so, or until he thinks he has attended often enough to be "signed up," and then he disappears. He may, of course, attend regularly to the end; but in either case his mind and energies are directed towards "getting up" the work for the First Examination, and the lectures are absolutely wasted on him. He does not trouble himself about ligaments and muscles—"they are not wanted." The consequence is he spends six months in learning what he could learn in three. But this is not the worst of it; for all this time he has either not dissected or if he have he has not troubled to learn anything about his dissections because "it is not required." It is all very well to tell him that he will require a knowledge of the soft parts in his Second Examination, and that he will require a certificate to the effect that he has dissected for twelve months prior to that examination. "Sufficient unto the day ....." is his motto. He goes up for his "elementary" and passes it, and now is confronted with the "Second." He may not be able to dissect in the coming summer session, or, if able, counter attractions prove too strong for him, and he leaves his work till the next winter. He now finds he has twelve months' work to squeeze into a six months' session, and he soon realises the impossibility of it and in the end "funks" his examination. This funking in very many cases is the beginning of the end. When done for the first time it arouses some repentant feelings, but by repetition its terrors are lost and the erstwhile average student become the full-blown "chronic" who, after haunting the place for several years, either turns over a new leaf or gives up medicine altogether, either voluntarily or because he is compelled to by his friends or his teachers—in any event, after he has wasted many valuable years of his life. Of course, he is to blame, but not entirely. He at first got up the work prescribed and passed the examination, but he stopped there; to him a bird in the hand was worth two in the bush. Having passed this examination, he found it of little help to him towards the "Second." He knows nothing beyond the bones and the attachments of muscles to them. He may never have seen the muscles themselves, but has crammed up the areas occupied by their attachments from plates. Instead of his work being now in considerable part a revisal, it is all new to him. The elementary examination is a snare, and in its present form is superfluous.

Can it be remedied in any way? I think so. There is an examination which resembles it in being an elementary one and in being held by a Conjoint Board. I allude to the First Examination of the Scottish Conjoint Board. In this examination a student is required to show a knowledge of the bones and ligaments of the body and the soft parts of both extremities. Having passed this examination the student is a long way on to his "Second," at all events much of his work is revisal, and revisal is always easier than the acquiring of new knowledge. Much as we in England are in the habit of sneering at this examination it is, nevertheless, infinitely better calculated to benefit the student, to satisfy the teacher, than is the miserable fiasco called an examination which is so often held in England.

In this letter I have confined my remarks to the elementary examination; if I am permitted I shall in the near future have some remarks to make on the Second Examination.

I am, Sirs, yours truly,

EDWARD FAWCETT,
Professor of Anatomy, University College, Bristol.

THE PRESENCE OF THE DIPHTHERIA BACILLUS ON HEALTHY SURFACES.

To the Editors of THE LANCET.

SIRS,—A boy fourteen years of age had diphtheria when at school early in June—that is to say, four months ago. He was brought to me on Oct. 14th, and I sent a specimen of mucus from his throat to be examined at the British Institute of Preventive Medicine; this I did, using a perfectly new camel's-hair throat brush for the purpose. From the society's report I learn that the diphtheria bacillus has been isolated from the specimen. The boy is apparently in perfect health, and his throat to the naked eye appears perfectly normal. I am informed that the throat had been thoroughly brushed with glycerinum acidi carbolici and with sulphurous acid up to three weeks ago.

I am, Sirs, yours truly,

J. W. ASTLEY COOPER, L.R.C.S., L.R.C.P., &c.
Lower Sherringham, Norfolk, Oct. 14th, 1895.

To the Editors of THE LANCET.

SIRS,—Mr. John Terry's communication on "Sore-throats in Influenza" which appeared in THE LANCET of Oct. 12th contains many points of interest and exhibits much praiseworthy and industrious investigation. I venture, however, to think that most medical men will agree with me that the "enlargement of the papillæ," the "deep-red colour," and the "strawberry tongue" may be found in many vascular conditions of the mucous membrane of the mouth—e.g., stomatitis, follicular tonsillitis &c.—and quite apart from influenza. Then again the membrane of which he speaks is certainly, in my experience (and I have seen a good deal of influenza), no common accompaniment of that complaint, and is, I would suggest, of a distinctly diphtheritic type, due possibly to some local cause. I quite agree with Mr. Terry that the ulcerated and congested condition of the throat so often present in influenza affords a highly suitable soil for the growth and development of the diphtheritic membrane, and for its frequently accompanying bacillus, but the last word as to the *rôle* played by the Pfeiffer-Kitasato bacillus has not yet been uttered, and those who rely exclusively on microscopic tests rather than on clinical observation simply court disaster. There is no question that the diphtheria bacillus has often been found on perfectly healthy mucous membrane and has often been absent, or at any rate undetected, in many cases of unmistakable diphtheria. I unhesitatingly endorse all that Mr. Terry has said as to the misleading results of bacteriological examination of suspicious false membrane, though I can hardly coincide with his opinion that it "has nothing in common with diphtheria." For my own part, I now always look askance at every case of low type inflammation of the throat or tonsils as containing the possibilities of diphtheria, and I have repeatedly watched the gradual evolution of apparently simple catarrhal tonsillitis into malignant diphtheria, followed by paralysis or death. I have often, especially in schools, watched with painful interest this gradual evolution from simple to malignant sore-throats, where each successive case has afforded the required soil for gradually maturing the poison until it reaches its fullest virulence as undoubted diphtheria. As to the occasional symptoms of influenza, they are so numerous and protean as almost to defy enumeration, depending as they do on the particular tract on which the virus expends its force, whether that be the mucous membrane of the throat, nose, bronchial passages, lungs, or bowels; but for the purpose of diagnosis certain symptoms may be relied on as never absent—viz., sudden attack, severe nervous prostration, pain, usually severe, in the head and limbs, and copious perspiration. It is by these never-failing symptoms one should be guided rather than by the variable appearance of the tongue. I may mention, in passing, that the last epidemic has been specially prolific in cases of faucial inflammation and ulceration, often mistaken for tonsillitis. There is a growing tendency, which cannot be too carefully guarded against, to allow bacteriological examination to usurp the place of careful clinical observation and study of symptoms. It should be remembered that bacteriology is the handmaiden, not the mistress, of medicine.

I am, Sirs, yours faithfully,

CHAS. EGERTON FITZ-GERALD, M.D.St.And.
Folkestone, Oct. 14th, 1895.

SPASMUS NUTANS AND HELMINTHIASIS.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Oct. 5th Dr. George Dickson, describing a case of spasmus nutans which occurred in his practice at Edinburgh, gave a full account of the ordinary features of this complaint and made the following remark: "Dentition must be looked upon as by far the commonest existing cause, but it is probable that any other reflex irritation would—other things being equal—produce the same effect." Will you allow me to inform Dr. Dickson and the other readers of THE LANCET that I have lately seen a case of spasmus nutans which was coincident with **tænia nana,**

and which I have reason to refer to this intestinal helminthiasis? The full account of the case is given in the *Bullettino 3° della Società Medica Pisana*. But it is well to bear in mind that only microscopical examination of the fæces can establish such coincidence of tænia nana with spasmus nutans or other disorders. I take, also, this opportunity of stating that I have recently examined a tænia which was passed by a child in the neighbourhood of Pisa, and which presents the characteristics of tænia flavopunctata (Weinland), of which till now only four examples occurring in man were known. I will give very soon a full account of it, but I wish to remark here that the eggs of tænia flavopunctata differ from those of tænia nana in being larger (being about 75 millimetres in diameter, whilst those of tænia nana rarely reach 50 millimetres in length), and that whilst the eggs of tænia flavopunctata have a striated outer shell, those of tænia nana possess an unstriated shell. The two large tæniæ of man (tænia solium and tænia mediocanellata) possess each a striated shell, but this striated shell is not the very outer shell of the same egg; the embryonic shell which is seen free in the fæces, being deprived of the outer shell of the egg, but having a diameter of no more than between 33 and 36 millimetres, cannot be confounded with the larger egg of tænia flavopunctata.

I am, Sirs, very truly yours,

Via San Lorenzo, Pisa, Oct. 9th, 1895. P. SONSINO.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—May I remind your readers that the profession in this district have been fighting the medical aid question since August, 1893, when the following resolution was unanimously adopted at a meeting held in my house? A copy was published in THE LANCET with appended signatures. The resolution was as follows: "That in consequence of the abuses brought to light by the inquiry into medical aid associations by the General Medical Council we have decided that we cannot in any way countenance these bodies, and we therefore refuse to recognise their medical officers professionally, in consultation or otherwise, until such abuses are removed." It was further resolved to endeavour to secure the coöperation of the profession in neighbouring towns and to get the matter brought before the British Medical Association meeting with a view to the expulsion of these men. This was entrusted to Dr. Leslie Phillips of the Medical Defence Union. It was also resolved to secure the coöperation of dentists, druggists, instrument makers, and medical agents. The local dentists gave us their support, as did a considerable number of medical agents. It was distinctly understood that no patient should suffer for want of attention as any of us would assume the charge of medical aid association patients, and, if necessary, give them gratuitous attention. That local combination can do much to hinder such abuses there can be no doubt, and I rejoice to see that other localities are following in our wake, but I venture to think that the time has arrived when something more general is necessary. To instance this locality, when those of us who were constantly called in consultation refused there was no lack of material from neighbouring places, and the larger the places and the more prominent the consultant the more ready he appears to be to join these men in their cases, and often to inconvenience himself to aid them in their difficulties. The height of absurdity seemed to be reached when one of the medical aid association officers was summoned for an error in the diagnosis of a case of small-pox; although he appealed to me most urgently to give evidence on his behalf I resolutely refused; but he was defended by the Medical Defence Union and a prominent consultant—a personal friend of my own—from a large town in the district was present to give evidence upon his behalf. Of course I felt obliged to resign my membership in the Medical Defence Union and to avoid meeting my friend in future, as it was generally understood that such consultants should be eschewed. I fear it will be only by such means that they will be forced to take action, but the body of the profession have it in their power thus to force them to assist in a necessary reform to remove an evil whose gigantic abuses should have roused them to vie with each other as to who should be the pioneer in such a movement.

To my mind there is no doubt that medical aid associations will ere long cease to exist, and if they have been the means of ascertaining who are the men in the profession willing to support them they will have been of use. I trust, too, that it will be the means of reforming the club system as a whole, for, being entirely independent of such practice myself, I can see that in many, including registered, societies similar abuses exist to a more or less extent, and it is the duty of all men holding such appointments to insist upon the removal of all these, so that medical officers of the medical aid associations cannot meet them with a *tu quoque* argument. I am thankful that the cause has such a powerful advocate as THE LANCET, and I can assure you that we in Kidderminster are determined to use every endeavour to safeguard the honour of the profession against such practice.

I am, Sirs, yours faithfully,

J. LIONEL STRETTON,
Secretary, Kidderminster Medical Society, &c.

Kidderminster, Oct. 14th, 1895.

To The Editor "THE LANCET."

DEAR SIR,—I am in receipt of Copy LANCET you sent me on Saturday last and note your article on this Society. And am much supprised at the one sided and *untrue* statement by your Special Correspondant. I think it would have been only Common Courtsey for him to have seen me and had his figures confirmed before rushing into print. In the first place he states we sweated our Doctors out of a profit of £231 during 1894, whereas our Balance on the year after paying salaries and expenses was only £40 (as per printed report enclosed), and out of this amount we increased our Junior Medical officers salary £25, then, again, he states the Committee get paid this is another false statement. The Committee work for nothing, and again he states he was told the medical officers had to Consult with 60 patients per hour, we I am astonished how any sane man should write down a statement of that discription, for he must know that it would be impossiable to get the patients in and out of the room in that time if he divides his figures by 8 or 10 he would be nearer the mark. With regard to stock mixtures, we do not use them. You will, therefore, see we are not such terriable sweaters as your Correspondant would try to make us out to be in his unfair statement. I must again express my supprise that a paper of such high standing as the LANCET should be a party to such a parteal statement when you could of been supplied with facts for the asking.

Yours faithfully,

WM. COULSON, Secretary.

Lincoln Oddfellows' Medical Institute, 12, North Parade, Lincoln, Oct. 14th, 1895.

*** We have examined the printed report sent to us with the above, and we find in it confirmation of our Special Commissioner's statement, and contradiction of Mr. Coulson's indignant letter. The balance of the Lincoln Oddfellows' Medical Institution for the year ending Dec. 31st, 1894, was not £40 but over £200. Our Special Commissioner was informed that on *one* occasion sixty patients had to be seen in an hour, and this is perfectly credible. With regard to payments to the committee, our Special Commissioner was referring to the payments which have been made to the secretary, the sub-secretaries, the treasurer, and the auditors. He should not have alluded to these persons as the committee, but the report shows them to have received the sum that he mentions—and more. Does Mr. Coulson say seriously that a dispensary at which over 30,000 prescriptions have been made up in the course of a twelvemonth is unprovided with stock mixtures? There is no harm in stock mixtures if they are made of good ingredients and are kept in sufficient variety and are renewed with sufficient frequency.—ED. L.

"UNUSUAL PROCEDURE AT AN INQUEST."

To the Editors of THE LANCET.

SIRS,—I am a little surprised that you should have followed the lay press in the misconception that the authority possessed by the foreman of a coroner's jury exceeds in any degree that of his brother jurymen or that the legislature recognises any distinction of one juryman from another.

The statutes under which coroners' juries are called upon to serve are the Juries Acts, 1825 and 1870, and the Coroners Act, 1887, and certainly in neither of these is mention made of such a person as a foreman, and I am unaware of the recognition of such a one in any statute. There cannot, therefore, be any statutory obligations to administer the oath primarily and separately, as stated in your annotation on the matter, to a person unknown to the law. Section 3 (1) Coroners' Act, 1887, provides that the coroner shall issue his warrant for summoning not less than twelve or more than twenty-three good and lawful men to inquire as jurors touching the death, &c. And Sub-section 3 provides, "When not *less than twelve* jurors are assembled they shall be sworn by or before the coroner diligently to inquire," &c. Further, Section 4 (5) provides: "In case *twelve at least* of the jury do not agree on a verdict the coroner may adjourn the inquest to the next session of Oyer and Terminer and Gaol Delivery held for the county or place in which the inquest is held, and if after the jury have heard the charge of the judge or commissioner holding such sessions twelve of them fail to agree on a verdict, the jury may be discharged by such judge or commissioner without giving a verdict."

I think the above extracts support me in the view I have always taken, that the foreman of a jury is chosen by his fellows rather as a matter of convenience, in order that their opinions may be canvassed by him, and through him their conclusions be conveyed to the coroner. In other words, he is simply chosen as their spokesman. Under the heading "Jury," Number, Sidney Taylor, on the Law of Coroners, says: "Not less than twelve nor more than twenty-three. As a verdict cannot be given by less than twelve, it is as well to have thirteen or fourteen in all cases, and even more where there is any probability of an adjournment, so that the death or illness of one or two of the jurymen may not bring the jury under twelve." The same authority, under "Swearing," &c., says: "Not less than twelve having been assembled, a foreman should be appointed. This is generally done by the jury selecting one of their number, but the coroner will make his own appointment if the jury do not agree. The jury should then be sworn in the form provided in the schedule to the Coroners' Act, 1887. This *need not be super-visum corporis* or all at the same time. ..... Some coroners swear first the foreman and then the rest, *but nothing is gained thereby*, and it is more convenient either to swear all at once on several Testaments or to swear half first and then to swear the remainder" acording to a short form given. It is the practice of some at least of the metropolitan coroners to adopt the plan of swearing the jury all together on several Testaments, and in cases where the jury do not without undue delay select one of their number as foreman to nominate the first on the list to so act, a plan adopted in other courts and for which further support is found in "Jervis on Coroners," p. 17, as follows: "The oath should be first administered to the foreman, who may be the first juryman called or may be nominated by his fellows."

I think it reasonable to assume that the Legislature contemplated, *inter alia*, the possibility of absence of unanimity arising in coroners' juries, hence the number to serve not being limited to twelve, as is the case of other common law juries. In the particular instance out of which the question here discussed arose I pointed out to the foreman that while I regretted he was amongst the dissentients he might have been the only one to disagree, and then how manifestly unfair would it have been not only to the other members of the jury, but also to an accused person, if undue weight were to be given to the opinion of one member; and may I not reasonably add that if one member of a coroner's jury had the power to veto the conclusions arrived at by the other members, a door might thereby be opened to the perpetration of injustice and corruption in their worst forms.

I am, Sirs, yours truly,

G. E. YARROW,
Deputy Coroner for North-East London.

Duncan-terrace, N., Oct. 9th, 1895.

"ADVERTISING IN HIGH PLACES."

To the Editors of THE LANCET.

SIRS,—Has not your correspondent "M.R.C.S." overlooked your headline "Audi alteram partem"? I should have been glad of the opinion of the best authority in some urgent cases, but have been deterred from seeking the same, as in a recent case, by the almost certain fact that during August and September one's patient would no doubt see a reliable substitute, but not Dr. or Mr. ——. I cannot help thinking that a list of probable dates of absence from home of eminent physicians and surgeons in THE LANCET or other professional paper would be of service to others as well as to,

Yours faithfully,

B. FARADAY GILES, M.D. Durh.

Hornsey, N. Oct. 14th, 1895.

AN EARLY METHOD OF INTESTINAL APPROXIMATION.

To the Editors of THE LANCET.

SIRS,—A few days ago, while looking up a subject in South's "Translation of Chelins's System of Surgery," published in 1847, I found on p. 464 of vol. i. the following words: "In complete division of the intestine Denans introduces into the upper and lower end of the gut a silver or zinc ring, thrusting it in inwards about two lines from each end; he then brings the two ends together over a third ring, of which the two springs retain the external rings. The included ends of the intestines mortify, and the rings thereby becoming unfastened are discharged by stool after they have united the serous surfaces in contact. This experiment in the dog has most successful results."

Chelins gives as his reference "Recueil de la Société Royale de Médecine de Marseille, 1826." The resemblance which the above-mentioned instrument must have borne to the modern Murphy's button is, indeed, remarkable, for while its mechanical details were evidently strikingly similar its mode of action must have been precisely the same. Truly there is nothing new under the sun.

I am, Sirs, yours truly,

Birmingham, Oct. 15th, 1895. LEONARD GAMGEE.

DENTAL QUACKERY AND THE GENERAL MEDICAL COUNCIL.

To the Editors of THE LANCET.

SIRS,—As an old reader of your valuable journal, may I respectfully ask the General Medical Council if the time has now arrived for vigorous action against breaches of the memorandum issued a long time ago to registered dental practitioners with regard to the employment of unregistered persons to perform operations in dental surgery? It is notorious that with very few exceptions that memorandum has been and is now wilfully ignored. How farcical is this state of affairs, and what a greater farce is the present Dental Act. I would also like to ask if the great army of dental quacks (companies and individuals) now practising dental surgery and administering anæsthetics *ad lib.* cannot be convicted under the Medical Act. In the face of the grossest ignorance and assumption on the part of unregistered persons, it is surely time for amending the Dental and Medical Acts. I am, Sirs, your obedient servant,

Oct. 15th, 1895. INQUIRER.

"SPECIALISM IN MEDICINE."

To the Editors of THE LANCET.

SIRS,—The letter of your correspondent, Mr. Blake, in THE LANCET of the 14th ult., gives the two common objections to specialists, each of which is opposed to the other. He remarks that "any good all-round physician or surgeon" would be much preferred to a specialist, though he adduces no reason for this statement; and, a little later, "were the specialist to strictly adhere to the particular branch which he has chosen ..... he would be held in higher estimation" &c. According to the first statement the more varied (all-round) his practice the better a consultant would be, and to the latter the more limited. No doubt there is some truth in both, but the practical issue would be that a specialist should first be a good "all-round" practitioner, and then, having a predilection for some branch and giving special attention to it, he would gradually become more and more a true specialist, though it is probably advisable that even a specialist should have some general work. Every practitioner is probably at heart a specialist, and takes more interest in, and devotes more attention to, certain diseases than others. And it

would be to the interest of the profession to develop this tendency, for work done *con amore* is almost always well done. Medical science is much too large for the ordinary, or more than ordinary, individual to grasp, and one instinctively turns to those having special knowledge and experience in cases of difficulty. The general practitioner himself when ailing is one of the first to seek the aid of the specialist.

It should be, and no doubt is, a great relief to the practitioner to find his clients acknowledging the impossibility of one man being able to deal adequately with every variety of disease and recognising that limited branches can be better practised by those who give them particular attention. In the country the specialist cannot exist, but the advantage of a town (if it be an advantage) is that special ability in particular departments can be obtained. The general practitioner has a fancied grievance against the specialist in that he thinks he takes a good deal of the former's work. In these days of competition and bad trade this is a serious matter, but on consideration it will, I think, be found groundless. In the first place, if the specialist were not what he is he would be a general practitioner and compete directly for all medical work; and, secondly, cases of special difficulty or duration will probably not increase the reputation of the general practitioner, who will gain rather than lose by consulting a specialist. The patients of the general man may certainly of their own accord consult the specialist for slighter causes and oftener than the practitioner would like. But they still remain his patients, while he is saved the labour of keeping up with medical knowledge in that department. The majority of diseases must, however, be treated by the general practitioner. The consulting physician or surgeon objects to specialism with more reason, yet even in his case similar arguments apply and will probably lead to all physicians and surgeons in large cities becoming specialists more or less. Already in London many leading medical men are consulted for their special rather than their general knowledge, and no mention of names is needful to show that they are sought after for their special knowledge of nervous, heart or chest diseases, of uterine or urinary affections, and even of such limited departments as hysteria, gout, or diabetes. These physicians and surgeons have the advantage of being general in name but special in practice—i.e., private practice. Specialisms make advance possible and life endurable; they relieve the general practitioner of a troublesome class of cases, and, instead of narrowing a man's views, wider them. My own experience has been that general men treat cases conventionally, the special man on their merits.

In answer to "A General Practitioner," I neither attempt to justify dishonesty nor to deny his particular facts; what I do deny is that they are peculiar to specialists or prevalent among them, as he would lead others to infer. I have heard of quite as much dishonesty in connexion with a hospital surgeon (general) and a leading man in the profession.

I am, Sirs, yours faithfully,

Oct. 2nd, 1895. A SPECIALIST.

REGISTERED SLAUGHTER-HOUSES.

To the Editors of THE LANCET.

SIRS,—In 1877 the township of W—— was constituted a local government district and a local board was elected. Slaughter-houses then in use were registered under Section 127 of the Town Improvement Clauses Act, 1847, which Act is incorporated with the Public Health Act of 1875 (Section 169). Two of the registered slaughter-houses have proved to be in undesirable situations, even when in good order and properly kept, and when neglected become nuisances. Can the registration be revoked, or is there no other remedy than dealing with them from time to time under Section 91 of the Public Health Act of 1875?

I am, Sirs, your obedient servant,

M.O.H.

GLASGOW EASTERN MEDICAL SOCIETY, SESSION 1895-96.—The opening meeting of this society was held on the 9th inst., when the following gentlemen were appointed office-bearers for the ensuing year:—President: Wm. Patrick, M.D. Vice-President: Alex. Patterson, M.D., F.F.P.S.G. Treasurer; Thos. McMurray, M.B. Secretary: Jas. Craig, L.R.C.P. Eng. Editorial Secretary: D. Couper, M.D. Extra Councillors: Geo. Mather, M.D., F.F.P.S.G., Wm. Findlay, M.D., Wm. Carr, M.B., Robt. McC. Service, M.B., Alexander Munro, M.B., and Jas. Dunlop, M.B.

THE MEETING OF THE ASSOCIATION OF GERMAN NATURALISTS AND MEDICAL MEN.

(FROM OUR BERLIN CORRESPONDENT.)

(Continued from p. 881.)

THE GENERAL MEETINGS.

THE last paper read at the second general meeting was a highly metaphysical one on the Neo-Vitalistic Theory, by the well-known biologist Professor RINDFLEISCH. He said that biology has of late withdrawn from mere materialism, and that its recent mode of contemplating nature, although the ancient "vital power" of the vitalistic theory has been abandoned, may with good reason be termed Neo-Vitalism. The mechanical theory has not succeeded either in clearly defining force and matter or in explaining their mutual relations. We cannot form a conception either of force without matter or of matter without force, but we do not know how they are connected together; the recognition of force as an essential quality of matter does not imply a comprehension of its nature. It is reasonable to suppose that the principle which moves the whole world is present also in any of its parts, but it is obvious that inorganic bodies do not really move of themselves without receiving impulses from outside. We must, therefore, confine our attention to animated nature. Even if we could succeed in measuring or counting the atoms concerned in every vital phenomenon we would still fail to understand the vital process itself. We must cast off the tyranny of materialism, which would make us believe that animate and inanimate objects are of identical composition and therefore of the same value for the purposes of investigation. What do we mean by the expression "life"? If we throw a stone into the air it will fall at a spot which may be determined beforehand by calculations based on the strength of our arm, the weight of the stone, &c. If we throw a bird into the air it also will come back to some part of the earth, but it can choose the place where it will alight and is independent of the impulse given to it at the moment of release. We regard the power of spontaneous movement as the characteristic sign of life, and the same principle exists even in the minutest parts of animated nature. A drop of blood from a living frog examined under the microscope at first shows a movement of the blood corpuscles, which in course of time ceases, but on warming the object it can be seen that the leucocytes change their form, and that little protuberances, like feet, emerge from the substance of the leucocytes and move actively on the glass. The movement becomes quicker and quicker and suddenly stops when the temperature exceeds a certain degree, beginning again when the source of warmth is removed and the temperature has again reached the proper point. If we compare these changes with the simple extension of an inorganic substance, a piece of copper for instance, we cannot but conclude that the living substance is able to transmute forces impressed from outside in a way which appears to us to be the result of individual selection. Not in the sense, of course, of an emancipation from the laws of nature; on the contrary, this selective power is a quality of animated matter which admits of at least a plausible explanation. We may suppose that the vital selection results from a preliminary transmutation of external impulses into tension. In this way even the strongest impulses are stopped, and if afterwards the cell or the animal makes movements they appear to the spectator to be spontaneous, although they result only from transmutation of accumulated force. Protoplasm consists of colloid substance the molecules of which by mutual attraction and by keeping their position with respect to each other are also elastic, and in this way that accumulation of tension becomes possible which is necessary for the explanation of self-determination. The distance of the molecules corresponds to the degree of tension. According to physical laws, warmth, electricity, chemical agents, &c., must influence the distance of the component molecules, and by augmenting or diminishing their potential energy may produce effects which appear as extension and contraction of the swollen colloid. But even if biology were able to give a description of all the transformations produced in a body by an external influence till an apparently spontaneous movement originates, if even we could see the atoms at work, we should not have got a knowledge of the essential underlying

principle unless some one could tell us what an atom really is. Meanwhile we may contemplate such phenomena of vital self-determination as are most like their prototype, the spontaneously moving matter. Such phenomena exist in our own body; each movement of our muscles is connected with a perception of it, which also has the important office of regulating that movement; each perception is connected with an action of the central nervous system, by which it is transmitted to the peripheral parts of the body. In all operations of the will, the intellect, and the sentient faculty there are a receptive action and a directive action, both so closely united that they seem to form one function of the mind—namely, self-consciousness—which, of course, appears to us as inseparable from self-determination. In proportion as the former increases in the more highly organised animals, so does the latter become further developed, until in man it presents itself as the essential characteristic of the genus.

The other papers read in the general meetings were by Professor ASTWALT (Leipzig) on the Mechanical Theory of the World, by Professor CREDNER on the Origin of the Baltic Sea, and by Professor VICTOR MEYER on the Problems of Atomology.

THE SECTIONS.

The following is an abstract of the proceedings in the sections.

Surgery.

Dr. HOFFA read a paper on the Treatment of Deformities arising from Hip-joint Disease. He said that as long as mobility exists these deformities are not to be treated by cutting operations, but by extension, by splints, or by Dollinger's method. If there is complete ankylosis osteotomy must be performed, but as the operations now in use shorten the thigh Dr. Hoffa has devised a new method, to which he has given the name of "oblique subtrochanteric osteotomy." He begins by separating the muscles and tendons from the trochanter to the external side of the femur, and then with a chisel severs the bone in an oblique direction. The limb is then extended so that the lower portion of the bone slides down along the upper portion, both osseous surfaces being maintained in contact. If the resistance of the muscles is too strong tenotomy must be performed before applying the extension.

Dr. LANDERER described a New Method of treating Tuberculosis by the Internal Administration of Cinnamic Acid. Experiments on animals prove that by this treatment the bacilli after the fourth month lose their virulence, and that fibroid tissue grows through the tubercles. Of 45 cases of simple chronic pulmonary phthisis without cavities treated by cinnamic acid all but 2 showed an improvement; their weight increased, their cough ceased, and the bacilli disappeared from the expectoration. Among 190 patients suffering from external tuberculosis the disease was in 155 cases situated in the bones and joints. Of these 6 died, 2 were not benefited, 8 were improved, 127 recovered, 2 would have to undergo amputation, and 10 were still under treatment.—Professor BERGMANN and Professor KÖNIG thought that tuberculosis could hardly be cured in this simple way.

Dr. NITZE gave an account of an Intra-vesical Operation for Tumours of the Bladder. His instrument consists of a sling connected with the ordinary cystoscope which may be easily introduced through the normal urethra. The surgeon in this way may remove the tumour under direct ocular inspection. After the operation the pieces of the tumour are voided with the urine. Tumours of the size of a pigeon's egg may be extirpated in this way, the bleeding being only very slight. The tumour is sometimes removed entire, sometimes in repeated sittings, and its base is energetically cauterised with the galvano-cautery. No anæsthetic is required, cocaine being sufficient. There have been 21 satisfactory cases.

Medicine.

Dr. MARTIUS discussed the Indications for Irrigation of the Stomach. They are of two kinds—positive, where the omission of irrigation would be a grave default; and relative, where the physician may use his discretion. Among the conditions belonging to the first category are acute poisoning, stagnation of the contents of the stomach from pyloric stenosis, and all cases of ileus. Under the second heading may be included carcinoma, acute and chronic catarrh, and functional abnormalities, such as hyper-secretion. In gastric neurasthenia Dr. Martius has sometimes obtained good results from irrigation.—Dr. MINKOWSKI said that he had performed irrigation for hæmorrhage from gastric ulcer, of course introducing a very smooth tube. Irrigation ought always to be done in the evening, so that the stomach may rest during the night.—Dr. LEO and Dr. RUMPF advised irrigation for the gastro-enteritis of infants

Dr. QUINCKE gave an account of the results of Puncture of the Spinal Canal, an operation which was described in THE LANCET of April 20th, 1895. He now uses an apparatus by which the pressure of fluid contained in the spinal canal may be measured. The effects are negative when the pus is too thick to flow through the cannula or when the needle has been improperly introduced. The best results were obtained in cases of serous and sero-purulent meningitis.—Dr. ZIEMSSEN confirmed the statements of Dr. Quincke, especially in cases of epidemic cerebro-spinal meningitis.—Dr. LENHARTZ said that his results had not been altogether favourable, and in several cases no fluid could be obtained although the operation was efficiently performed. In one case where eighty cubic centimetres of fluid were evacuated there was no obvious effect on the sensorium, and in another instance the patient became worse after the operation.

Dr. POSNER read a paper on the Etiology of Nephritis, in which he stated that he had made experiments on animals in order to ascertain if the bacteria in the bowels can produce nephritis by entering the circulation. Glomerulitis and epithelial necrosis follow ligature of the ileum. If matter containing the bacterium coli is injected into a bloodvessel, real nephritis ensues. Bacterium coli introduced into the healthy kidney itself is very soon excreted, but if the kidney had been previously impaired by injections of alcohol many bacillary emboli are found. Dr. Posner came to the conclusion that nephritis may arise from infection by enteric bacteria.

Obstetrics and Gynæcology.

Dr. LEOPOLD discussed the question, Is Digital Examination necessary during Confinements? He said that the position of the fœtus and the progress of the labour can be ascertained by abdominal palpation merely, and that digital examination should only be resorted to when there are abnormal symptoms. It is unnecessary when there are no abnormalities in the labour or in the condition of the mother, and the great majority of confinements should therefore be conducted without it.—Dr. FEHLING advised his audience to abstain entirely from digital examination and recommended that midwives should learn to disinfect their hands properly so as to avoid the communication of infection to lying-in women.

Dr. PROCHOWNIK described the Treatment of Ectopic Pregnancy by Injections of Morphia and gave particulars of four cases in which he had used injections of from 0·03 to 0·04 gramme of morphia into the fœtal membranes by way of the vagina. Three of the cases recovered without incident; in the fourth, which was complicated with gonorrhœa, an abscess formed and opened into the rectum. In one case the injection was made through the abdominal walls and the bowel, which was adherent to the fœtal membranes, was perforated. Although the fœtal sac became filled with pus the patient recovered after the operation. Injections of morphia ought not to be performed after the third month, and they are useless when once abortion has begun. Injection through the vagina is preferable to an abdominal operation except in cases of acute perimetritis or gonorrhœa.—Dr. FEHLING was of opinion that ectopic pregnancy may be compared to a malignant growth and therefore requires operation.

Dr. FEHLING read a paper on the Treatment of Prolapse of the Uterus. He recommended that as a precaution women ought to stay in bed a somewhat long time after confinement. In slight cases pessaries ought to be tried first, and in elderly women, where operation is contraindicated, a bandage should be applied, but in all other cases operative measures are advisable. To avoid relapses the old vagino-perineal plastic operation ought to be combined with Olshausen's ventro-fixation or Dührssen's vagino-fixation. Total removal of the uterus is followed by only 7 per cent. of relapses, but it mutilates the woman and is attended by a mortality of 10 per cent.; it ought, therefore, to be reserved for aged patients and cases of exceptional severity.

Physical and metaphysical questions were predominant in this year's proceedings, whilst practical medicine was almost exclusively confined to the sections. It is said that the committee is preparing to make a change in the arrangement of the annual programme by allowing only two general

meetings and by extending the work of the special sections. No doubt the organisation of the association is once more in need of reform. The next meeting will be held at Frankfort.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Opening of the Medical Institution: Winter Session.

THE first meeting of the Liverpool Medical Institution for the present session took place on the 10th inst. Mr. Chauncy Puzey, the President, gave a very interesting address to the 140 members present. He began by paying a graceful tribute to Sir Joseph Lister, alluding to his retirement from active duties at King's College Hospital, and to the presentation to him of his portrait by his colleagues and past pupils. Mr. Puzey then referred to the time, now thirty years ago, when Sir Joseph (then Mr.) Lister began his experiments with carbolic acid in the treatment of abscesses and compound fractures with a view to diminish the terrible pest of pyæmia, at that time the great enemy of successful surgery. Mr. Puzey next alluded to the coincidence that just at that time he came to Liverpool as junior house surgeon to what he called the old Royal Infirmary, but which it would be more correct to style the second infirmary. The first one, the real old infirmary, must ever be memorable to surgeons as the scene of Park's great triumph in conservative surgery. The contrast between the surgical treatment of those days and of the present, the successful results of present-day surgery and our indebtedness to Sir Joseph Lister were next noticed, and as he had had the opportunity of trying or watching their results Mr. Puzey decided to give a slight sketch of the earlier history of the antiseptic movement, which might be described as terminating with the decline and fall of the carbolic spray. When he came to the second infirmary, which, completed in 1824, was, as he observed, new compared with Guy's Hospital, he was struck with the comparative freshness of the atmosphere of the wards, and subsequently with the smaller rate of mortality after major operations; but the mortality, especially from pyæmia, was such as would now be considered terrible. Primary union after amputations was so rare as to be considered remarkable, and suppuration was always present in such operations as the removal of tumours or ligature of the larger arteries. After remarking on the different condition of affairs at the present time, Mr. Puzey passed on to detail Lister's work as described by himself, as practised at first, and as practised now. He alluded to the late Mr. William Jackson Cleaver of Sheffield as having been house surgeon at the Liverpool Infirmary rather more than twenty years ago, of his having been Lister's house surgeon at the Edinburgh Royal Infirmary, and of his having been successful in his attempt to do away with pyæmia. Allusion was also made to Mr. H. D. Farnell, now of Eastbourne, senior house surgeon at the Northern Hospital when Mr. Puzey was surgeon, and who practised the Listerian method with great success. After giving further proofs of the great results following the antiseptic treatment Mr. Puzey concluded as follows: "For the present, gentlemen, we can look forward with pleasurable anticipation to the time next year when we shall have him in this city as the President of the British Association. Then I am certain that from no section of our citizens will he receive a more hearty welcome than from the members of the Liverpool Medical Institution."

The late M. Pasteur.

Mr. Puzey made the following graceful allusion to the late M. Pasteur: "Pasteur has been taken away from the scenes of his useful work; but while the whole civilised world has heard of his departure with respectful regret, his own country has accorded him the honour of a State funeral—as usual, in such matters, setting an example in its tribute to the memory of great scientists and professional men which our own country might do well to follow."

Bequests to Liverpool Hospitals.

The following institutions will benefit to the amount given against each by the will of the late Mr. Bernard Vincent Hall of Liverpool: the Royal Infirmary, £5000; Northern Hospital, £2500; Royal Southern Hospital, £2500, and the Ladies' Charity and Lying-in Hospital, £1000.

The Northern Hospital and Cases of Abdominal Surgery.

Within a period of nine days three persons have been admitted into the Northern Hospital suffering from severe abdominal wounds. The first was a man aged thirty-four who was stabbed while trying to separate a husband and wife. He was admitted on the 5th inst. under the care of Mr. Arthur Wilson suffering from a wound one and a half inch long a little below and to the right of the umbilicus. About three inches of small intestines were protruding, but there was no injury to them or to the omentum. The intestines were thoroughly washed and returned, and the patient is now doing well. The second case was that of a man aged twenty-eight, who was admitted on the 9th inst. also under Mr. Wilson. He had jumped or been pushed through a window fifteen feet from the ground. When admitted, after being three-quarters of an hour on the pavement, the ascending and transverse colon with about three feet of small intestines were found protruding through an incision about three inches long in the right hypochondrium. An incision was found about half an inch long in the transverse colon, from which fæces were passing. All the intestines and omentum which protruded were black and dirty. The wound was sutured, the bruised omentum removed, everything well washed and flushed, and then returned. The patient succumbed on the evening of the fourth day. The third patient, a woman aged thirty, was admitted on the 14th inst. under Mr. Puzey with a small transverse wound through which several coils of bowel were protruding. Two wounds, one dividing half and the other the whole circumference of the gut, were closed with Lembert's suture. On pulling out more gut a portion was found transfixed in three places within about three or four inches, the mesentery also being badly cut, while several arteries were spouting. The whole of this piece was excised and the ends approximated by means of Murphy's button. On enlarging the wound upwards and downwards to return the intestine it was found that the abdominal cavity contained a quantity of blood, while the pelvis was full of clot. On flushing this away the finger passed into a cut in the fundus of the uterus; the abdominal wound was extended downwards, and the wound in the uterus (through which protruded the cut cord of a fœtus in a very early stage) was closed by deep suture. The "toilet of the peritoneum was made" and the abdominal wound was closed in the usual way. Twelve hours later the woman was rallying well.

Annual Dinner of the Medical Institution.

The annual dinner in connexion with the Medical Institution was held at the Adelphi Hotel on the 5th inst. Over 100 members and guests were present. Advantage was taken of the circumstance that Jan. 13th last was the "silver wedding" of Hospital Sunday in Liverpool to make special allusion to the clergy and ministers in connexion with the medical charities. The Rev. J. Bell Cox and the Rev. John Watson, both prominent members of the Hospital Sunday Committee, the latter being also Honorary Secretary, responded.

Oct. 15th.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Extension of the Manchester Royal Infirmary.

THE report of the sub-committee was presented yesterday to the grand committee appointed in March last to consider the question of the increased accommodation long required by the infirmary. The problem was how to provide 120 more beds on the present site without materially encroaching on the unoccupied space. The sub-committee was not unanimous, and a minority report was also presented. Schemes for providing this accommodation by lateral extension of the present building and by adding another storey had already been considered and rejected. The possibility of obtaining this accommodation by altering the internal arrangements, by removing the nurses from the home within the grounds, and by removing also the out-patient department and the laundry, were considered, and the conclusion arrived at was that, "as it was opposed to all modern experience to locate the nurses' home elsewhere than within the precincts," it should not be removed, and that the removal of the laundry and the out-patient department would not give the needed accommodation. The decision

of the sub-committee was that "only by rebuilding would it be possible adequately to provide, in a fit and proper way, the requirements of an infirmary brought up to date scientifically with every latest improvement, and otherwise worthy of the city of Manchester." The pavilion plan was unanimously considered to be the most suitable, and competent authority stated that there would be no difficulty in constructing a pavilion hospital fulfilling all the conditions required. "They would, however, ask to be allowed respectfully to suggest that their decision be accepted with as little delay as possible by the grand committee, and be immediately thereafter submitted to the trustees for ratification." The chief points in the minority report were as follows: "They do not see the necessity of building an entirely new hospital," believing that everything required can be provided by a modification of the existing building. They are of opinion that the cost of a new building cannot be less than, and will probably exceed, £200,000. They consider that by adding a storey (a plan already rejected), and by making minor alterations, all the "reasonable" accommodation required could be obtained for £40,000 or £50,000. The two reports having been read, resolutions were adopted to the following effect: That the signatories of the majority report be requested to obtain full plans and elevations, and evidence from experts in hospital buildings and others as to the practicability and efficiency of such plans, and an approximate estimate of costs; that a further sub-committee be appointed to obtain the opinion of experts and others as to the building of a new supplementary hospital elsewhere to provide the additional accommodation required, with estimates of costs &c., and to report as to the alterations required in the present building "to bring it up to date and to make it as efficient as possible according to modern ideas"; that the signatories of the minority report be asked to give full details of this scheme, prepare plans, &c., with all the powers given to those who signed the majority report.

Oct. 15th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Scarlet Fever in Edinburgh.

THERE is a considerable epidemic of scarlet fever in Edinburgh. In the City Hospital there are 359 patients, the hospital being so crowded that accommodation has to be made elsewhere for some cases, and there is a probability that the disused hospital in the Canongate may have to be reopened. The extent to which the City Hospital is used is noteworthy, for it shows the confidence the public have in it now as compared with the feeling when it was first opened. In this connexion it may be stated that the ground purchased as a site for the new City Hospital has been examined by a body of officials, and the part upon which the building is to be erected has been determined.

Milk-supply and Infectious Diseases.

At a meeting of the Edinburgh Town Council a question was asked by one of the members as to the powers they possessed to examine all cows whose milk is sent into the city. The question was asked in view of the connexion which had been sometimes proved to exist between the milk supply and epidemics of infectious diseases. The town clerk, in reply to the question, stated that the magistrates and council had ample power to appoint a qualified veterinary surgeon to inspect and examine all cows in byres outside the city whose milk was sold within the city.

Edinburgh Royal Infirmary.

The beginning of October marks the opening of the winter's work in the Royal Infirmary. At this date the resident physicians and surgeons are changed. On Tuesday the clinics were begun, and all the wards are now in charge of their respective senior physicians. Dr. Ernest E. Maddox has been appointed an assistant ophthalmic surgeon, and Dr. George Mackay has been made a full ophthalmic surgeon.

Fever Hospital in Hawick.

The corporation of Hawick have wisely determined to try to arrange terms with the district committee with a view to the provision of a joint hospital for infectious diseases for the town and district. It is thought that only ten or twelve beds will be necessary.

Opening of St. Andrews University.

The winter session of the United College was opened by an address by Principal Donaldson. He said that the administration of the financial affairs of the University was at a dead-lock, and as that was due to legislation and the difficulty of interpreting it, it was the duty of the Legislature to intervene and find a way out of the dead-lock. Regarding external organisation and appliances there was nothing but prosperity and success to report. Within seven or eight years five new buildings had been erected at a cost of £20,000. One of the new buildings was to be specially devoted to women students, and to bear the name "University Hall." Seven scholarships had been instituted, each of the annual value of £100. He said that when all the scholarships were arranged they would have the largest number of scholarships and the most complete distribution of them of any university in Scotland.

Glasgow Southern Medical Society.

At a meeting of this society on the 3rd inst. the following gentlemen were elected office-bearers for session 1895-6: President, Alexander Rankin, M.D.; Vice-President, David Tindal, M.D.; Treasurer, J. C. Edmiston, M.D.; Secretary, T. W. Jenkins, M.D., 1, Newark Drive, Pollokshields; Editorial Secretary, J. G. Wilson, M.B.; Seal-keeper, David Couper, M.D.; Governor of Victoria Infirmary, James Dunlop, M.D.; Court Medical, John Brown, M.D., A. Napier, M.D., J. Lindsay Steven, M.D., T. Lapraik, M.D., and T. Walls White, M.D.; Extra Members of Council, C. E. Robertson, M.B., T. Richmond, L.R.C.P., and G. W. Thomson, M.D.

Royal Hospital for Sick Children, Glasgow.

The directors of the hospital have made the following appointments: Walter K. Hunter, M.B., and Alice J. McLaren, M.D., B.S., to be extra-physicians to the dispensary; L. R. Sutherland, M.B., to be pathologist; Jno. F. Barr, M.B., assistant house surgeon; and Samuel English, M.B., clinical assistant at the dispensary.

The Health of Dr. J. B. Russell of Glasgow.

Though Dr. Russell has been able for a time to return to his duties as medical officer of health it has been deemed advisable that he should not undertake the heavy work of the winter. He has therefore obtained six months' leave of absence from the town council and intends to winter either the south of England or the Channel Islands.

Hospital for Infectious Diseases for Dumbartonshire.

The Dumbartonshire County Council has for some time been endeavouring to find a site in the western division of the county suitable for the erection of a hospital for the reception of infectious cases. Recently there has been an outbreak of scarlet fever in the Vale of Leven, and this appears to have brought matters to an issue, for the council has now purchased a piece of ground situated midway between Renton and Alexandria, and here intends to erect a hospital adequate to the requirements of the district.

Measles Epidemic at West Calder.

Owing to a severe outbreak of measles at West Calder the public school has been closed by order of the school board. The epidemic has spread rapidly and nearly 400 cases have been notified.

Medical Appointments.

Mr. Alfred Young, M.B., has been appointed surgeon to the Central Dispensary, Glasgow, and Mr. Jas. Connal, M.B., has joined the staff of the Grove-street Dispensary, Glasgow.

Veteran Volunteers.

An anniversary of considerable interest was celebrated at the Royal Cottage, Loch Katrine, on the 12th inst. On Oct. 14th, 1859, the Queen formally opened the Loch Katrine water-supply of Glasgow, and on that occasion Her Majesty saw for the first time a body of her citizen soldiers under arms, her guard of honour being supplied by the then recently enrolled Glasgow companies. It has been the custom year after year for the surviving members to celebrate the anniversary, and this year it was decided to meet at Loch Katrine for the thirty-sixth anniversary. No less than thirty-four members of the Old Guard spent the day together in the Trossachs, and in the afternoon dined together in the Royal Cottage. The chair was taken by Brigade-Surgeon Dr. James Dunlop, and amongst the other "veterans present were Surgeon-Lieutenant-Colonel

J. G. Cumming, M.D., and Alex. Patterson, M.D. After dinner a telegram was despatched to Her Majesty respectfully expressing the feeling of loyalty which still keeps the Old Guard together.

Aberdeen University: the Inaugural Celebrations.

All the arrangements for these celebrations, which will take place next week, are nearly completed. The new clock and bell have been safely located in the Mitchell Tower, the organ is nearly finished, and the rest of the work is being pushed on apace. An interesting part of the proceedings will be the presentation to Mr. C. W. Mitchell, together with an address, of a gold medal commemorative of his father's large share in this big extension scheme. The medal will cost about £100, and replicas in bronze may be had for 7*s.* 6*d.* Mr. Mitchell will also receive an address from the students acknowledging the special interest that Dr. Mitchell took in the students, as shown by the magnificent Union erected at his expense. A large number of graduates have intimated their wish to be present, and there is every prospect of the celebration being a success. The University Court have now decided to proceed with the north tower, terminating the north wing. Some weeks ago it seemed likely that this part of the scheme would have to be deferred for lack of funds. The tower is to be a square one, 32 ft. wide on each face, and with a total height of 120 ft., and its design will harmonise well with the Mitchell Tower and the rest of the buildings. It will accommodate on the ground floor the sacrist's house, on the second floor will be the Faculty and University Court-room, and on the third floor will be provision for the Secretary of the University Court.

The Health of Aberdeen.

The zymotic diseases notified last week were—scarlet fever, 21; whooping-cough, 40; erysipelas, 8; puerperal fever, 1; membranous croup, 1; total, 71, being 27 cases more than the former week, due to a considerable increase in scarlet fever and whooping-cough.

Oct. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

A Pathological Institute for Dublin.

THE usual addresses inaugurating the commencement of the medical session were delivered at the Meath and St. Vincent's Hospitals on the 12th and 15th inst. Mr. E. Lennon, physician to the Meath Hospital, devoted a large portion of his address to a matter which has been more than once alluded to in the pages of THE LANCET—that is, to the necessity which exists in Dublin for a pathological and bacteriological institute. It was suggested that such an institution might be established in connexion with the Royal Academy of Medicine and based upon the lines of that already founded by the Royal Colleges of Physicians of London and Surgeons of England. The President of the Royal College of Physicians, who occupied the chair, said, in proposing a vote of thanks to the lecturer, that, while admitting the great importance of the matter, it would be a mistake to underrate the difficulties as to its accomplishment, more especially those of a pecuniary nature. The President of the Royal College of Surgeons, in seconding the vote, expressed himself as even less sanguine as to the success of the proposal made by Mr. Lennon. Sir William Stokes, on the other hand, said that he did not take such a dismal view as to the difficulty and want of unanimity in carrying out the project of the lecturer, which if successful would be of the greatest benefit not merely to the cause of science, but to the cause of humanity as well. He believed that when the lecturer's words were thought over, and his suggestions contemplated, the feasibility of the plan would not appear, as it did to their chairman, of a very Utopian character. He believed that with an earnest effort of the profession generally this great philanthropic purpose might be accomplished.

County Monaghan Infirmary.

I understand that the governors of the Monaghan and Cavan Lunatic Asylum have agreed to purchase the old Monaghan Infirmary premises and grounds at a cost of £1000.

Omagh District Asylum.

Owing to the overcrowded state of this asylum the governors have been considering the advisability of building a new wing, and at their meeting on Oct. 10th a communication was read from the Board of Control in Dublin sanctioning a loan of £35,000 for the purpose of carrying out the necessary changes in the way of alterations and additions to the institution. It is expected that the building will be completed and ready for occupation at the end of March, 1898.

New Mortuary in Belfast.

The Corporation of Belfast have just erected a new mortuary to replace the old morgue in Victoria Square. The new building is situated at the end of the Sand Quay on the river Lagan, a site obtained by the Corporation by their Act of 1878, when they purchased the rights of the foreshore from the late Marquis of Donegall. The mortuary is entered from the Laganbank-road, but the plans have been so drawn that none of the windows look on to that thoroughfare. There is a yard one side of which forms by a wall the boundary next the river, and a door placed in this wall provides a means of receiving bodies which may be discovered in the Lagan river, and by this means they will not need to be conveyed through the city. There is a house near the entrance gates for the van, which also affords space for the storing of coffins. To the right of this is the building proper, in which there is a waiting-room for jurors and an attendance-room, two mortuaries (one for infectious the other for non-infectious cases), a post-mortem room, and a dead-house, with lavatories for the use of medical men and others engaged. All the floors are of Limmer asphalt on cement concrete, and the walls are lined with white, glazed tiles. All the rooms are well heated and ventilated and supplied with water, the pipes being exposed on the face of the wall to permit ready access in case of leakages or gas escapes. The post-mortem room is fitted with Jennings's patent revolving dissecting-table and two Jennings's patent lavatory basins with hot and cold water, all the taps and wastes being operated by the foot, so that, without the hands being used at all, the water can be turned on or off. The shelves in the room are of plate-glass on enamelled iron trestles, and the benches on the mortuaries are of slate. The windows are of plate-glass, and are so arranged that, if deemed advisable, a body can be viewed by a jury without the latter entering the actual apartment in which it lies. The whole building has been designed by Mr. J. C. Bretland, the borough surveyor, upon whom it reflects the utmost credit, being now the best mortuary in any city in Ireland or, indeed, the United Kingdom. The medical members of the Belfast corporation, Alderman Graham, M.D., and Councillors O'Neill, M.D., and Bigger, M.D., have greatly helped the surveyor by valuable hints.

The Outbreak of Typhus Fever at Ardboe, county Tyrone.

At a weekly meeting of the Cookstown guardians, held on Oct. 12th, it was reported that all the cases from Ardboe were in hospital except one, and those were convalescent. Eight hospital patients were confined to bed. On that morning a man had been brought in, but as the assistant nurse was suffering from the disease and no other nurse available it was only possible to bring him by getting his wife to accompany him in the ambulance. The medical officer was empowered to get a nurse from the Belfast union if required, and to have the ambulance properly ventilated. Mr. Burgess and the relieving officer have attended in all the houses where there had been typhus fever and burned the bedding, and payment has been made for the things destroyed. As showing the terror existing in one district Mr. Burgess and the relieving officer, assisted by two boys who were only just recovering from the fever, had to coffin a man and bury him themselves; no one could be got to assist except the driver of the hearse and of the car. The medical officer was obliged to change all his clothes after being at Ardboe as there were no means of disinfection.

The Duties of Medical Officers, Masters, and Matrons in Irish Workhouses.

The Local Government Board have declined to hold a sworn inquiry in reference to this point as requested by the Ballymena board of guardians.[1] The inspector had an interview with the officers concerned. The master, the Local Government Board think, had exceeded his duty in transferring the lunatic to the lunatic wards without consulting the medical officer, and they do not think the

[1] THE LANCET, Oct. 5th, 1895.

master should dispute the authority of the medical officer in questions affecting the classification of sick inmates.

Belfast Lunatic Asylum.

The overcrowded state of this asylum is becoming a very serious question for the governors to deal with. There are 286 cases now resident beyond the normal accommodation, and while the female division accommodates 180 cases, there are now 277 resident. The matter has been left in the hands of the accommodation committee; some think room could be had at the workhouse, others at the model farm or at the superintendent's house. At the meeting of the governors held on Oct. 14th a resolution was passed urging the Board of Control in Dublin to expedite matters in reference to the preliminary arrangements, submitting suggestions and recommendations to architects for their competitive plans for the new asylum at Purdysburn. A deputation from the Board of Control, it is expected, will shortly visit Belfast to discuss details with the governors of the Belfast Asylum.

The Guardians of the Cork Union and the Establishment of a Pasteur Institute for the Treatment of Hydrophobia.

The Cork guardians have from time to time sent patients bitten by rabid dogs to the Pasteur Institute in Paris, and they have been considering whether they ought not to urge the Government to establish a similar institution in London. At their last meeting Mr. Harding, dispensary medical officer of Ballincollig, presented a lengthy report on the subject of Pasteur's treatment, in which he urged that it was a success. Dr. Magner, one of the guardians, on the other hand, expressed grave doubts as to whether any definite conclusion could be arrived at. At the last meeting of the guardians Mr. Harding presented a further report, accompanied by letters he had procured from about a dozen of the profession in the city. These gentlemen generally endorsed Mr. Harding's views, though one or two expressed their opinions rather guardedly. Dr. Magner pointed out that Mr. Harding had not sought the opinion of the medical officers of the city dispensaries, under whose care persons suffering from dog bites frequently came in the first instance, and he added that those gentlemen's opinions would not correspond with Mr. Harding's. He also pointed out that some of the statistics on the subject were somewhat misleading. The discussion was a very interesting, academic one, very suitable for a medical society or the pages of THE LANCET, but I fear a little bewildering to the average rural guardian. The guardians finally passed a resolution asking the Government to take steps for the establishment of an institute in London, but at the instance of Dr. Magner they added that they would not approve of the rates of the Cork Union being requisitioned for the purpose.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The late Baron Larrey.

THE above-named surgeon, who died last week in his eighty-seventh year, at Bièvres, near Versailles, was principally known to the world as the son of his father, the great surgeon of Napoleon the First's campaigns. His father's influence procured him admission, at an early age, into the medical department of the army. We then find him a *Chirurgien-élève* in 1828, *Sous-aide* in 1829, *Aide-major* in 1832, and *Chirurgien-major* in 1841. Graduating as an M.D. in Paris in 1832—the year of the cholera epidemic—he was placed in charge of the cholera wards at the Pitié Hospital. But he soon resumed active regimental service, and we next find him—now an *Aide-major* (assistant surgeon)—at the Siege of Antwerp. Here he earned his first decoration—that of Chevalier of the Order of Leopold. In 1835 he successfully competed for the post of Professeur-agrégé (de Chirurgie) of the Paris Faculty. In 1841 he was appointed to the chair of Surgical Pathology at the Army Medical School of Val-de-Grâce. Nine years later he exchanged the chair for that of Clinical Surgery. No sooner were the Bonapartes restored to power than he was appointed Surgeon-in-Ordinary to the Emperor, but it appears that the confidence reposed in his illustrious father by Napoléon le Grand was not inherited by him, for the great Emperor's nephew had hardly ever recourse to his services. He acted during the Italian campaign of 1859 as *médecin en chef* of the army, and he then distinguished himself by—what was at that time an innovation—organising the transport of the wounded by rail. In 1867 he was promoted to be *Inspecteur du Service de Santé Militaire*, and was at the same time decorated with the *plaque* of Commander of the Legion of Honour. Since 1850 he had been a member of the Academy of Medicine, and later he was admitted to the membership of the Société de Chirurgie. Of both corporations he had acted as President. Finally, in 1867, he became a *membre libre* of the Académie des Sciences. He wrote a number of interesting works, which, with about 100 contributions to journals, constitute the sum total of his professional life-work. At the fall of the Empire he retired from the army, but he represented for several years at the Chambre des Députés the *arrondissement* of Bagnères de Bigorre as a Bonapartist. In his old age he occupied himself in relating, in his book entitled "Madame Mère" (Napoleon I.'s mother), the doings at the Imperial Court. The work is said to have fallen flat, the craze now raging for the anecdotal history of the Napoleonic era being then unknown. The halo surrounding his name procured him quite exceptional consideration at the learned societies of which he was a member. His attendance at the Academy of Medicine was, up to quite a recent date, most regular, and great respect was paid to his utterances. His venerable and picturesque appearance was in large measure accountable for the privileged position he occupied. Someone very aptly compared him to *un portrait peint par Gérard*. His "bringing-up" would naturally have the effect of fostering within him all his ultra-conservative instincts, and his respect for rigid professional and academic *étiquette* was abundantly evident on the occasion of the communication made to the Académie de Médecine by Professor Brouardel regarding the state of health of Dr. Cornelius Hertz. His views on surgery remained to the last conservative. But although he will, as a surgeon, leave behind him no trace, his urbanity, his old-world politeness of *un homme de cour*, will for a long time be missed.

Treatment of Dacryocystitis.

M. Duclos[1] speaks in eulogistic terms of the curative effects of fluorol in the above-mentioned affection. This salt (fluorol, or fluoride of sodium) is bluish-white, odourless, of a salty flavour, and is soluble in twenty-five parts of its weight of water. A 1 or even 0·5 per cent. solution prevents the development of pyogenic organisms. Fluorol is to be preferred to corrosive sublimate (which is sixteen times more toxic), silver nitrate, permanganate of potassium, formal, &c., because its introduction into the lacrymal apparatus is not painful, and because, further, it is distinctly more beneficial. Dr. Lagrange, in whose clinic at Bordeaux the new treatment has been extensively employed, opines that fluorol proves more efficacious than sublimate &c. because it does not coagulate albumin and because a protecting envelope is thus not provided for the germs. M. Duclos and Dr. Lagrange state that cases of dacryocystitis are very quickly improved, and often completely cured, by injections of a 0·5 per cent. solution of fluorol.

Hospital Districts in Paris.

Yesterday the new regulations concerning the admission of patients into the Paris and the department of the Seine hospitals came into operation. Under the new arrangement non-paying patients can only be received into the hospital specially attached to their *circonscription*, the privilege formerly enjoyed by them of choosing the institution in which they desired to be treated being thus abolished. There are, however, certain exceptions to this rule. Thus, children from any quarter will continue to be admissible into the two children's hospitals (Enfants Malades and Trousseau) as also into the children's surgical wards of the Tenon Hospital and the orthopædic wards of the Hôpital des Enfants Assistés. Patients suffering from certain special diseases will continue, as heretofore, to be admitted into special hospitals—namely, St. Louis, Ricord, and Broca Hospitals for skin diseases and syphilis; Salpétrière Hospital for diseases of the nervous system; Lariboisière Hospital and the Hôtel-Dieu for eye affections; Necker Hospital for diseases of the urinary apparatus; Cochin Hospital for gynæcological surgery; Aubervilliers and Bastion 29 Hospitals for infectious diseases. In case of accidents the sufferers will be received into the nearest hospital.

Oct. 15th.

[1] Congrès Français de Médecine Interne.

ROME.

(FROM OUR OWN CORRESPONDENT.)

An Epidemic of Infanticide.

CERTAINLY people "sup on horrors" in the evening press of Italy. The case of infanticidal mania to which I lately drew attention has been followed by others on a much more extended scale, but before proceeding to these let me pursue the former to its conclusion. The malefactor in question (Callisto Grandi, it appears, is his name) is no longer to be allowed to return a free agent to the scene of his murders. Popular indignation made the step impossible, and so the authorities relegated him provisionally to the Muratte, the well-known Florentine prison. From this an attempt was made to transfer him to the Pia Casa di Lavoro (an establishment for the detention of ex-criminals on whom industrial task-work is imposed), and on his way thither he was followed through the streets by an ever-increasing crowd, which commented freely on his extraordinary cranial malformation and his unmistakable look of "dangerous imbecility." A first halt was made at the Questura (police-office), where, it having been ascertained that the Director of the Pia Casa had peremptorily refused to admit him, he was confined in a strong room. By this time, however, medical opinion as to his mental incapacity prevailed; at last, "at long last," says a Florentine contemporary, he has been recognised as a "dangerous imbecile" or "irresponsible delinquent," and from the Questura he has been finally consigned to the Manicomio (lunatic asylum) of San Salvi. Had he been properly dealt with in the stage of puberty or even earlier, as Lombroso recommends, his diseased development would have been demonstrated, possibly rectified under treatment, or, if found irremediable, he would have been placed under surveillance such as would have made his crimes impossible. The deplorable fact remains, however, that his case is an all too common one, there being hardly an aggregation of Italian youth in which potential malefactors of the Grandi type are not to be found. The army, indeed, has many of them, as the recent wholesale murders committed by epileptoid subjects in barracks have so painfully attested. And now, when one "irresponsible delinquent" has finally been acknowledged to be such and detained in an asylum, we are startled by an infanticidal outbreak of appalling cold-bloodedness — twenty-three children poisoned by one of those semi-lunatics who pose as "witches." At Aderno, in the province of Catania in Sicily, a woman thirty-three years of age, Gaetana Stimoli by name, made it a practice to allure little children to her den with sweatmeats, after which she gave them a drink of wine containing undiluted phosphoric acid. The victims barely got home when they were seized with agonising pains, in which they died. The woman, having been arrested, at first denied her guilt, but then made a full confession, from which it appeared that, having lost two children of her own, she believed their death had been caused by incantation—"erano stato stregati" (they had been bewitched) was her expression—and to avenge them she poisoned the children of others! The woman's den was minutely searched and found to contain all the armoury or "stock-in-trade" of witchcraft, phosphorus included, while at the necropsy of her victims the evidence of poisoning by phosphoric acid was fully made out. The incident has created a profound impression throughout the kingdom, where similar cases (one victim having been boiled to death in a cauldron containing so-called "medicinal" herbs) are reported from nearly every province. The public are gradually becoming aware that Italy's expensive and ineffectual penal system is one gigantic illustration of "beginning at the wrong end," and that some such educational system as that which her medico-psychologists recommend can alone protect her from the homicidal explosions by which her daily life is periodically saddened.

The White Cross.

On the lines of the Red Cross, an association has sprung up in Italy for the relief of the civilian who from illness or accident has had to suspend work. A charitable institution designed mainly for the very poor, it had its origin in February, 1886, by which time, in Rome especially, the influx of labourers to assist in the reconstruction of the city had multiplied the contingent of poor patients. Under the name of "La Croce Bianca Italiana" it chose as President the Commendatore Luigi Pagliani, Professor of Hygiene at Turin, now Director-General of Public Health for the kingdom, and as Vice-Presidents the Commendatore Professor Achille Ballori, Sanitary Director of the Roman Hospitals, and the Advocate Umberto Dal Medico. On the council these gentlemen are assisted by the Commendatore Pietro Mariotti, Signor Tondi, member of Parliament, and Professor Gualdi, head of the "Ufficio Municipale" of Rome. So organised, the Croce Bianca has at its disposal a well-disciplined corps of young volunteers, male and female, equal to any duty in picking up and transporting the victim of an accident or the "wounded soldier of industry," administering "first aid" in urgent cases and tending or nursing them afterwards in hospital. Nearly eleven years old, the institution is a daily developing one, in harmony with the expansion and subdivision of the army of labour, and has stimulated the organisation of others, the Croce Verde (green cross) and the Croce Turchina (blue cross), also humanitarian in their design and medical, or quasi-medical, in their *personnel*. At Turin, where the association has taken vigorous root, an exhibition of its "armamentarium"—cars, portable chairs, stretchers, surgical appliances, materia medica and therapeutic adjuvants—has lately closed after drawing crowds of interested and appreciative visitors. Amid much that calls for reprehension, or even grave censure, in her institutions, Italy, "the mediæval mother of medicine," is laudably active in humanitarian work, and her White Cross associations, following up, or rather extending, that Red Cross Society of which she justly claims the maternity, are so many steps towards a goal at which all civilised countries ought to aim.

Oct. 13th.

PUBLIC HEALTH IN BRISTOL.—The expenditure in the department of the sanitary authority for the six months ending September, 1895, is as follows: Medical officer's department £2396; hospital expenses and medical attendance, £881; port sanitary account, £428.—The present number of the *Bristol Medico-Chirurgical Journal* congratulates the medical officer of health (Dr. D. S. Davies) and his assistants on the very satisfactory reports that have just been published and says: "The public of our city should be made acquainted with the fact that, though our sanitary rate may vie with that of most towns for amount, we can boast of being not only one of the healthiest towns in England, but in the world."

SOCIETY FOR THE STUDY OF INEBRIETY.—A meeting of this society was held on Oct. 3rd, and the president, Dr. Norman Kerr, in opening a discussion on the proposed Probationary Curative Detention of Inebriates, and others deemed to be insane, said that at present many inebriates and other persons were certified as lunatics and sent to asylums for the insane, who might have been otherwise cured under a better legislative state of things. The rich could now enter a lunatic asylum as voluntary boarders without certification of lunacy, but the poor could not avail themselves of this provision. The only chance of the poor escaping certification, even if only temporarily insane for a few weeks or less, lay in their recovery during the three days before a justice decided on their mental state, in most cases, or during the fourteen days in a few cases. Some were cured within the shorter and some within the longer term while thus attended and looked after (kindly and considerately, as Dr. Kerr had seen in some metropolitan workhouses). But, successful as the result was, how much more successful would it have been if the patients had been in a special temporary institution set apart for the mentally afflicted in an early stage, away from the hundreds of able-bodied and infirm pauper inmates, and with special equipment and ample grounds for the treatment of the insane. A good name would be "Hospital for the Treatment of Mental Disease." If at the end of six or eight weeks the patients were not cured of their insanity, then they might be certified as insane and transferred to an asylum. He ventured to predict that in twenty years or so more there would be: (1) probationary curative mental hospitals; (2) asylums not in one block, but in a number of smaller buildings, as in some American asylums; and (3) mental convalescent homes, where the discharged from the asylum could be received for a few weeks, to render the re-entrance of the convalescent into the world less trying, a work to some extent attempted at present by the excellent After-Care Association. Mr. Parker Young, Dr. Longhurst, Dr. Smith, and Dr. Usher approved of the suggestions.

Obituary.

SIR THOMAS CRAWFORD, K.C.B., LL.D., M.D. EDIN., F.R.C.P., F.R.C.S. IREL.

HONORARY SURGEON TO THE QUEEN.

THE news of Sir Thomas Crawford's death on the morning of Saturday, the 12th inst., will have been universally received by the officers of the department of which he was the late Director-General and by a very large number of his friends and acquaintances with much sorrow, but by all who had the honour and privilege of knowing him intimately it will have been received with profound regret. A very able, capable man, and a thoroughly upright gentleman, who long held high and responsible posts in the department over which he was ultimately presiding when he retired from the service in May, 1889, has passed away—a man of generous, hospitable, and sympathetic nature, of fine presence, noble character, and of great intellectual capacity, with a departmental experience and a knowledge of military organisation and detail, and a power of work, of which very few indeed could boast. The late Sir Thomas Crawford was not by any means a rich man, and he had a large family, but he was nevertheless most charitable. He strove in this way and by his life, his influence, and his example to promote every good work. Many of his benevolent acts were known to his friends, but some were only known to himself. Among the sad experiences of life it too often falls to the lot of earnest men of elevated character to have to undertake tasks of extreme difficulty and to be misunderstood, and the late Director-General, no doubt, had his trials in these respects. No man had held higher or more responsible positions in the department, or enjoyed a greater popularity or a higher reputation for ability, soundness of judgment, and integrity of purpose, than did the late officer when he was selected for the direction of the Army Medical Service, but he assumed the post in very troublous times. He had soon after his appointment as Director-General to vindicate his service from the unjust aspersions which had been brought against it in Egypt in 1882, which he successfully did with singular ability, winning the esteem and respect of all impartial men. This was succeeded by an enormous amount of work and responsibility in making all the medical arrangements for the campaigns that subsequently followed in that country, with the result which may be briefly summarised by stating that from the first to the last expedition successes were obtained of a surgical and medical kind that had probably never before been achieved in warfare. Then came the question of military rank and titles, about which Sir Thomas Crawford most sincerely entertained strong convictions. He held, as everybody did, that as the military service formed a necessary and integral part of the military machine its officers must be provided for and adequately recognised and respected in every way, their rank and positions being definitely fixed upon a sound and secure foundation. As regards the question of titles, however—such as major-general, colonel, captain, &c.—he considered that this was an undignified position to take up and likely to prove detrimental to the true interests of a medical service. In an obituary notice it would be quite out of place to discuss the merits of this matter, but there is no doubt that the naval medical service and many able and experienced men of the military service were of the same opinion, and some still think that he was quite right and that the object in view could have been better attained than it was. Be this as it may, that Sir Thomas Crawford was sincere and conscientious in the course he took—the wisdom and correctness of which he maintained to the last—there can be no doubt whatever.

SIR THOMAS CRAWFORD, K.C.B., LL.D., &c.

Sir Thomas Crawford was a North of Ireland man and was born in 1824, and was consequently seventy-one years of age at the time of his death. He was educated at the University of Edinburgh, where he took his degree of M.D., and was subsequently made an Hon. LL.D. of the same university. He entered the Army Medical Service as an assistant surgeon in 1843, serving with the 51st Light Infantry throughout the Burmese war of 1852–53, and was on board the Hon. East India Company's steam frigate *Feroog* during the naval action and destruction of the enemy's stockades in the Rangoon river, also being actively employed during the succeeding three days' operations in the vicinity and at the storming and capture of Rangoon, and the storming of the White House Redout. He was also at the capture of Bassein, in various skirmishes at Prome, and in the advance on Meaday. For these services he received the Burmese medal with clasp for Pegu. Subsequently gazetted to the 18th Royal Irish Regiment, he served in the Crimea during the Eastern campaign from February, 1856 (when he was advanced to the rank of surgeon), to the fall of Sebastopol, receiving the Crimean medal with clasp for Sebastopol and the Turkish medal. Whilst in the same corps he acted as Principal Medical Officer to the Southern India Field Force in the Northern Mahratta country and the Deccan in 1857–58, and was subsequently selected as head of the medical branch in the Director-General's Office in London, afterwards proceeding to India as the chief administrative medical officer of the Sirhind circle in Bengal. On his return from India he was appointed head of the Army Medical Department in Ireland. Not long afterwards he returned to India as Surgeon-General of Madras, and subsequently as Surgeon-General and Principal Medical Officer of Her Majesty's forces in that empire. He occupied that position during the latter part of the second Afghan Campaign, and was thanked for his services in General Orders by the Commander-in-Chief and by the Governor-General in Council. From this responsible post he returned in 1882 to assume the duties of Director-General of the Army Medical Service, in succession to Sir William Muir, which office he filled till his retirement in May, 1889. Whilst serving as Principal Medical Officer in India, Surgeon-General Crawford was mainly instrumental in introducing the station hospital system into that country, by which a very large financial saving to the Indian Government was effected. Sir Thomas Crawford, who was created a K.C.B. in 1885, was, as we have already stated, an Hon. LL.D. of Edinburgh, an Hon. Fellow of the Royal College of Surgeons and of the Royal College of Physicians, Ireland, an M.Ch. of the Royal University of Ireland, and one of the honorary surgeons to

Her Majesty from October, 1886. He had also been a member of the Senate of the Army Medical School at Netley. The deceased officer was twice married; his first wife died in 1860, and in 1869 he married the daughter of the late General Edwards, C.B. Lady Crawford, who was a most amiable and charming woman, died in the spring of the present year, to the great grief of all who knew her, but especially of her husband and their children, to whom their loss was an irreparable one. Sir Thomas Crawford's death has soon followed that loss, and it may be safely affirmed that no more upright or energetic public servant was ever conveyed to the grave than was borne there on Tuesday last. Sir Thomas Crawford, whose health and strength had been sensibly declining since his wife's death, suffered of late from the effects of prostatic disease and cystitis, on which uræmic symptoms eventually supervened. He was buried at Charlton Cemetery on the 15th inst., where his predecessor in the direction of the department and his great friend, Sir William Muir, lies interred.

Our illustration is a reproduction from a photograph by Mr. Wayland of Blackheath and Streatham.

THOMAS KEITH, M.D., F.R.C.S. EDIN.

THOMAS KEITH was born in the village of St. Cyrus, in Kincardineshire, on May 20th, 1827. He was the youngest but one of seven sons, three besides himself adopting the medical profession. His father was the well-known Rev. Dr. Keith, the author of several works on prophecy, the most noted of which was written more than half a century before his death, which took place at the age of eighty-nine. Always a delicate boy, Thomas Keith suffered from the early loss of his mother, and ascribed much of his ill-health through life to the want of proper care when a child. Educated first at the parish school, then at the Grammar School of Aberdeen and the High School of Edinburgh, he spent three years at the Arts classes at Aberdeen University, and then three in Edinburgh, being able to count one of these Aberdeen years as one of those necessary for the Edinburgh medical curriculum. In 1845 he was apprenticed to Sir J. Y. Simpson, and in his second year was put into the Maternity Hospital as house physician. In 1848, at the age of twenty-one, he graduated M.D., and was taken by Mr. Syme as his house surgeon. After fifteen months, and when he had arranged to stay another year with Mr. Syme, the appointment of physician to the British Embassy at Turin was offered to and accepted by him, and he spent two years in Italy. Returning to Edinburgh he became partner with his brother, Dr. George Skene Keith, in one of the largest general practices in that city, and in addition gave considerable attention to diseases of the ear, and up to the date of his leaving Edinburgh did a considerable amount of aural work. But his desire was always towards surgery. There is a certain amount of romance almost connected with his first operation of ovariotomy. In 1862 a workman employed putting in some windows was much impressed with Dr. Keith's knowledge of glass, which he had gained in the early days of photography, and spoke to him about his wife, who had a tumour. Dr. Keith gave the man little encouragement at first, but yielding after a time he saw the patient, and in answer to the inquiry whether the tumour could be removed told her and the husband that the operation of ovariotomy was nearly always fatal, that he had never seen it performed, but that he was willing to try. The patient said that she was willing to run any risk, and the ovarian tumour was removed in 1862, the case being complicated by a rupture of the cyst and double pleurisy. The husband was kept up most of the night before the operation boiling the water which was to be used, and one large sponge was inserted into the peritoneal cavity once; but the opinion of those present was that this dangerous interference with the peritoneum, as it was then thought, must not be repeated. Nature made a drain for the retained fluid towards the end of the second week by making an opening through the lower part of the wound. In this, his first case, Dr. Keith laid the foundation of his success—chemical cleanliness was what he aimed at, cleanliness not so much of the surroundings as of the patient and of everything that was to come in contact with her, and he also saw the necessity of leaving the peritoneal cavity dry. His second case also recovered; the third he found dead in bed one morning and the nurse lying dead drunk on the floor; the fourth was the largest he ever removed, the tumour lying not only on the thighs, but on the legs of the patient. The operation was performed in a cottage in the country, and the weight of the tumour and fluid removed was 120 lb., in addition to which a large amount of fluid escaped on to the floor. When the patient was put back to bed apparently moribund Dr. Keith said to the nurse that she would not give her much trouble as she would die soon; some weeks later the woman had the pleasure of telling Dr. Keith what she had heard him say. These recoveries, with others which followed, made a great sensation, and Dr. Keith thus in conjunction with his friend Mr. (now Sir) Spencer Wells, who had begun his great work four years earlier, established on a firm footing the operation of ovariotomy in Great Britain and in a lesser degree over the whole world. It is mainly to these two men, friends for over thirty years, that abdominal surgery is in the position it is to-day, for they were instrumental in laying the foundation upon which all abdominal operations have been founded.

In 1864, after some months of almost constant vesical irritation and pain, during which Dr. Keith continued hard at work, Mr. Syme opened the bladder, but failing to find a calculus there he succeeded in removing one from the urethra. Within six weeks of being operated upon, and before the wound was healed, Dr. Keith with his wonderful energy performed a difficult operation in Dumfriesshire. In 1866 a visit to Koeberlé at Strasburg taught Dr. Keith the use of the spirit lamp for cleaning the points of all instruments. He also saw the catch forceps, at that time unknown in England, and brought home two of Koeberlé's drainage-tubes. These were seen to be too short, and it was evident to Dr. Keith that the drainage must be from the bottom of the pelvis. Until Dr. Keith commenced to use the carbolic spray in 1887 all his instruments were put through the flame of a spirit lamp, thus realising very much the idea of chemical cleanliness. His dressing for years for all wounds had been gauze or lint soaked in carbolic and glycerine. About 1866 Dr. Keith was asked to become surgeon for ovarian diseases to the Royal Infirmary. Unfortunately, the only room available was one in the medical house close to the small-pox and scarlet fever wards, and he therefore preferred to open a small private hospital, in which he operated on any poor woman who was sent to him either from the hospital or elsewhere, lodging, feeding, nursing, and sometimes burying, them at his own expense. When the new infirmary was opened in 1879 suitable, though inadequate, accommodation was found for him, and on one occasion as many as eighty patients were on the list waiting for admission. In 1885 his son, who for some time had unofficially been doing most of the work, was associated with him. Until the spray was used Dr. Keith's health had been improving, and for some years he had had no hæmorrhage from the kidneys; but the poison was too much for these organs damaged by the presence of cystine calculi for many years, and at first after long operations, and then after most, there was a return of these attacks of hæmaturia. The spray was not discarded, however, until patients began to suffer in the same way. Since then he returned very much to his old practice; every instrument was washed as carefully as formerly, but instead of the spirit lamp carbolic acid was used, the skin of the patient and everything that came in contact therewith was carefully disinfected, although the elaborate washing of hands and disinfecting of rooms was looked upon by him as unnecessary. As an example of his great success it may be mentioned that one day the undertaker who was employed when a death occurred in his private hospital stopped the nurse in the street and asked her if he had offended the doctor, explaining that he had had no work from him for such a long time.

In 1871 a portrait of Dr. Keith, along with a service of plate, was presented to Mrs. Keith. In making the presentation Professor Christison said: "There were several grounds which had led to this expression of admiration—viz., Dr. Keith's great success in treating one of the most terrible diseases which may affect the life of women, his disinterestedness, his fine character, his devotion to duty, and the appreciation of the great sacrifice he had made in pursuit of his object. The great operation which Dr. Keith had so often and so successfully performed had been at one time looked upon as almost certainly fatal, and had been kept from disuse by one or two bold surgeons until the time when Dr. Keith and another

surgeon in the South had succeeded in establishing it as one of the legitimate operations in surgery." Ovariotomy led to other operations, and hysterectomy in his hands became almost as safe; but he never liked the operation, and condemned in no measured terms the number of such operations which are now performed. It was with keen interest that he watched the progress of Dr. Apostoli's treatment. In 1887 one of his sons went to Paris to learn the new method from Dr. Apostoli, and on his return Dr. Keith decided that no operation should be performed for fibroid tumours of the uterus until electricity had been fairly tried on a number of cases. Over one hundred tumours were thus treated, and the results on the whole were so good that Dr. Keith did not perform many operations for fibroid tumours of the uterus after that time, though, strangely enough, the last operation but one performed by Dr. Keith, now nearly three years ago, was a hysterectomy, his last being a fixing up of the uterus by his operation of clamping the broad ligament. In 1888 Dr. Keith left Edinburgh for London; he had missed greatly his old friends, the late Dr. Mathews Duncan and Sir Joseph Lister. In 1889 he paid a professional visit to Mexico, his second to the new world. On the 9th inst. Dr. Keith quietly passed away, after a life of uncomplaining suffering and ill-health, of which few knew, but none better than his life-long friend, Dr. Mathews Duncan, who, in a dedication, has described him as a "hero in surgery."

Dr. Keith is survived by his widow, four sons, and three daughters. Two of the sons are medical men.

JOHN WATERS, M.R.C.S. ENG.

THE death on Tuesday, the 8th inst., at the age of sixty-seven years, of Mr. John Waters, of 41, Bloomsbury-square, W.C., has been a source of deep regret to all his friends. His illness had lasted nearly eighteen months and was borne with exemplary patience. Having completed his professional education as a student of the Middlesex Hospital, he obtained the diploma of the Royal College of Surgeons of England in 1856. He subsequently became a Fellow of the Medical Society of London and was for some years one of the surgeons to the Farringdon Dispensary. Up to within a few weeks of his death he discharged with untiring zeal and energy the duties appertaining to his official capacity as a member of the various governing boards of the parishes of St. Giles and St. George, Bloomsbury. To a thoroughly practical knowledge of his profession he added a geniality of manner which procured for him the esteem and affection, not only of his patients, but also of a large circle of friends.

ALFRED JOHN WILLIAMS, M.R.C.S. ENG., L.R.C.P. LOND.

WE regret to announce the death, at the early age of thirty-two years, of Mr. Alfred John Williams, recently in private practice at West Hill, Wandsworth. Mr. Williams received his medical training at King's College Hospital, which he entered in 1884. He was house surgeon to Professor Cheyne whilst Professor Koch's treatment by means of tuberculin was being carried out in Professor Cheyne's ward. In his observation of the treatment he displayed great earnestness and ability, subsequently contributing the result of his studies to our columns under the heading "Notes on Tubercular Cases under Koch's Treatment in King's College Hospital." He afterwards became a surgeon on board one of the P. and O. Company's steamers. After two years in this post he settled down at Wandsworth, where, as parish medical officer during the eighteen months previous to his decease, he won the esteem of all classes for his devotion to the poor. He was attacked by typhoid fever whilst in the discharge of his duty, and died in the third week of his illness. At King's College Hospital Mr. Williams was well known for his devotion to duty, while his good-nature endeared him to all his contemporaries.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Jos. Oettinger, formerly Professor of the History of Medicine in the University of Cracow.—Dr. V. J. Eltsinski, formerly Professor of Special Pathology in Moscow, at the age of sixty-two.

Medical News.

UNIVERSITY OF GLASGOW.—The following have passed the First Professional Examination (New Regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch. B.) in the subject or subjects indicated after their respective names (B., Botany; Z., Zoology; P., Physics; C., Chemistry):—

George Alexander (B., C.), Andrew Aitken Barclay (B., Z.), James Freeborn Bennett (B., P.), Andrew Brownlie (B., Z., C.), George Frederick Buchan (P.), James Carruthers, M.A., (C.), George Morris Crawford (Z.), Charles Peter Garvie Crichton (B., Z.), Charles Cheven Cumming (B., C.), William Dick (B., P.), James Austin Dickie (B., C.), Frank Lindsay Dickson (B., P.), David Curr Douglas (B., Z.), John Pinkerton Duncan (B., C.), Hugh Campbell Ferguson (Z., C.), Comyn MacGregor Finlay (B.), John Andrew Garden (Z., C.), George Gardner (B., Z., C.), John Gardner (Z., P.), George Garry (Z., C.), William Gibson (Z., C.), Hyam Goodman, M.A. (B., Z., C.), Charles Aikman Gourlay (Z.), Nicol Jamieson (Z., P.), Andrew Kerr (C.), John Francis Lambie (B.), Norman Maclean Leys (B., P.), Andrew Love (Z., C.), Ramsay Millar (B., C.), Ebenezer Mitchell, M.A., (Z., C.), Daniel Morrison (Z., C.), Peter MacIntosh M'Fadyen (B., C.), John M'Gilchrist (B., C.), Charles Forbes Maclean (B.), George Todd Maclean, M.A. (B., Z.), Norman Forbes Macleod (B.), William Johnston Maclure (Z., C.), John M'Millan (Z.), Wm. Seymour MacMillan, M.A. (B., Z., C.), John Patton (P.), Thomas Stephens Picken (B., C.), John Reid, Lanark (P., C.), David James Smith (B., C.), John Steele Smith (Z., P.), William Stewart Stalker (B., Z.), Peter Alexander Steven (Z., P.), Alfred George Stewart (B., P.), Thomas Morton Strang (P., C.), Robert Taylor (Z., C.), Charles Pinkerton Thomson (B., P.), William Brown Thomson (Z., C.), Joseph Swinburne Townley (P., C.), John Turnbull (B., Z.), Arthur Vost (B., Z., P.), Alexander Laurie Watson, M.A. (B., C.), Joseph White (Z., C.), Morgan Watkin Williams (B., C.), Alexander Wilson (B., C.), William Wright (B., C.), John Doctor Young (B., P.).—Women candidates: Marjorie King Henderson Fleming (B., Z.), Helen Mary Gordon (B., Z.), Mabel Hardie (B., Z.), Catherine Spence Howden (B., Z.), Jessie Sophia Beatrix Hunter (B., Z.), Ina Lochhead M'Neill (B., Z.), Maud Ada Richards (B., Z.), Elizabeth Helen Smith (B., Z.), Edythe Marjorie Walker (P., C.).

The following have passed the First Professional Examination (Old Regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Stewart Dunbar, George Munro MacLeod.—Women candidates: Martha Jane Gilmore Cox.

The following have passed the Second Professional Examination (New Regulations) for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subject or subjects indicated after their respective names (A., Anatomy; P., Physiology; M.M. and T., Materia Medica and Therapeutics):—

Alexander Smith Allan (M.M. and T.), James Alston (A., P., M.M. and T.), George MacLellan Blair (M.M. and T.), John George Wilson Boleyn (A., P.), William Cochran Burns (A., P.), David Louis Cairns (M.M. and T.), Francis James Charteris (M.M. and T.), George Clark (A., P., M.M. and T.), Joseph Adam Clarke (M.M. and T.), George Coats (A., P., M.M. and T.), George William Coats (M.M. and T.), James Duncan Cochran (M.M. and T.), Joseph Muir Corbett (A., P., M.M. and T.), Robert Crawford (A., P.), John Crow (A., P.), Walter Scobie Findlay, M.A. (M.M. and T.), James Finlayson Fleming (M.M. and T.), Adrian Andrew Forrester (M.M. and T.), Thomas Bonnar Garvie (A., P., M.M. and T.), Thomas Hunter, M.A. (A., P.), Alexander Lawrie (P., M.M. and T.), Alexander Millar, Lindsay (A., P.), John Watson Little (A., P., M.M. and T.), John MacDonald (M.M. and T.), Murdoch Macdonald (A., P.), James M'Haffie (M.M. and T.), David M'Kail (M.M. and T.), Laurence Abel Mackenzie (A., P., M.M. and T.), James M'Queen, M.A. (M.M. and T.), James Service Ormond (A., P., MM. and T.), John Reid, Glasgow (A., P., M.M. and T.), Norman Emil Henry Scott (M.M. and T.), Robert Scott (A., P.), John Laird Simpson (A., P.), Alexander Bankier Sloan (M.M. and T.), Samuel Macfarlane Sloan (M.M. and T.), David Steele Smith (M.M. and T.), John M'Callum Stewart (A., P., M.M. and T.), Donald Sage Sutherland (A., P., M.M. and T.), James Douglas Carnon Swan (A., P.), Matthew Logan Taylor (M.M. and T.), Daniel Rees Thomas (A., M.M. and T.), Walter Lewis Thomson (M.M. and T.), William James Alexander Walker (A., P.), William Watson (M.M. and T.), John Wotherspoon (A., P.), William Wyper (M.M. and T.), David John Young (M.M. and T.)—Women candidates: Daisy Annabelle Bennett (A.), Mary Gardner (A., P.), Jane Lorimer (A., P.), Minna Amelia Macfarlane (A., P.), Agnes Renton Robson (A., P.), Catherine Love Smith A., P.), Jessie Hawkesworth Smith (M.M. and T.).

The following have passed the Second Professional Examination (Old Regulations) for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

Andrew Phillips Aitken, Walter Colquhoun, M.A., William Duncan, Charles Elphinstone Fleming, James Millar, James Rankin, B.Sc., Alexander Page Robertson, David Wallace Smith, Alex. James Thompson Swann.—Women candidates: May M'Mullen Pearson.

The following have passed the Third Professional Examination for the degrees of Bachelor of Medicine (M.B.) and Master in Surgery (C.M.):—

(*A*) *Including Pathology.*—William Allen, James Mitchell Bonar, Hugh Borland, William Brown, James Butler, Hugh Calderwood,

B.Sc., John Lindley Carstairs, M.A., Thomas Cochrane, Peter Latimer Leitch Craig, M.A., James Gardner, William Hansen, John Hepburn Lyell, Archibald Mason, Andrew Brown Murray, Norman Macnair, B.Sc., Robert Nelson, William Seaton Paterson, David Lyon Stevenson, M.A., Henry Hyslop Thomson, Andrew Colville Wilson, B.Sc.—Women candidates: Agnes Jane Anderson, Mary Philip Graham, and Mildred Ransome.

(*B*) *Not including Pathology.*—Donald M'Gregor Campbell, John Arthur Clarke Doonan, John Sharp Douglas, Charles Lowson, William Martin, M.A., John Irvine MacMillan, M.A., William M'Mullen Pearson, James Hood Rankin, James Rutherford Ratcliffe, Alexander Robertson, and John Taylor.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the Second Examination of the Board in the subjects indicated on Wednesday, Oct. 9th:—

Anatomy and Physiology.—Laurence Otway Fuller, Edward Augustus Bullmore, Walter Sirr Sheldon, and Arthur Edward Francis, University College, London; Nelson Joseph Roche and Victor Stanley Partridge, Charing-cross Hospital; Charles Louis Francia, Bernard Edward Granville Bailey, Edmund Newton Berryman, Alexander Hampton Brewer, and John Kenneth Sprot Fleming, St. Bartholomew's Hospital; William Reginald Cazenove, Harold Percy Waller Barrow, Jenkins Howells, and Norman Williams, Guy's Hospital; Frank Bawtree, St. Thomas's Hospital; Warren Meade, St. George's Hospital; Harry Hipwell, Middlesex Hospital; and Kenneth de Risley Bell and Henri Nelson Harness, King's College, London.

Anatomy only.—Henry Priest Shanks, University College, London; and Edgar Curnow Plummer, King's College, London.

Sixteen gentlemen were referred in both subjects, and one in Anatomy only.

Thursday, Oct. 10th:—

Anatomy and Physiology.—George Gunning Campbell, Edward Percy Court, William Henry Cazaly, John Dalebrook, and Norman Humbert Joy, St. Bartholomew's Hospital; Peter Rowley Tarbet and David Llewelyn Kurtz Pritchard, University College, London; Arthur Daniel Lewis, Hugh Watson Fox, and William Walter Harrison, Guy's Hospital; Harold Cotterell Adams, Middlesex Hospital; James Charles Stewart Oxley, St. Thomas's Hospital; John Ignatius Worgan Morris and Llewellyn Lindop, St. Mary's Hospital; Ralph Bignell Ainsworth and Francis Barraliier Thompson, St. George's Hospital; and Fritz John Alfred Beringer, London Hospital.

Anatomy only.—Arthur Wellesley Penrose, Guy's Hospital; Arthur Cyril Bird, St. Thomas's Hospital and Mr. Cooke's School of Anatomy and Physiology; Walter Amsden, St. Bartholomew's Hospital and Mr. Cooke's School of Anatomy and Physiology; Frank Howard Lawson and Edward Simpson Shave, Middlesex Hospital; and Ernest John Distin and John James Cecil Hamilton, King's College, London.

Physiology only.—George Herbert Doming, St. Thomas's Hospital; and Colville Smith Agnew, Charing-cross Hospital.

Twelve gentlemen were referred in both subjects, one in Anatomy only, and one in Physiology only.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bahia:* Dr. José Carneiro de Campos has been appointed Professor of Anatomy.—*Buda-pest:* Dr. Julius Elischer, Lecturer on Gynæcology, has been granted the title of Professor.—*Cracow:* Dr. Jakubowski has been promoted to the Ordinary Professorship of Children's Diseases.—*Innsbruck:* Dr. Dimmer of Vienna has been appointed to the chair of Ophthalmology.—*Munich:* Dr. Otto Frank has been recognised as *privat-docent* in Physiology, Dr. H. Neumayer as *privat-docent* in Laryngology, and Dr. Martin Hahn as *privat-docent* in Hygiene.—*Prague (Bohemian University):* Dr. F. Marés has been promoted to an Ordinary Professorship of Physiology.—*Rostock:* Dr. Schuchardt has been appointed to the newly established Professorship of Psychiatrics.

THE TENTH ANNIVERSARY OF THE INTRODUCTION OF THE "SAFETY" BICYCLE.—In an annotation in the last issue of THE LANCET on "The Dangers of Cycling" mention was made of the introduction of a machine in 1885 which has served as the model upon which the most popular machines have since been constructed. The name of this machine, which was omitted by an inadvertence, is the "Rover," and a dinner in commemoration of the tenth anniversary of its introduction was recently given by its inventor, Mr. J. K. Starley, at the Café Royal, Regent-street, W.

ST. GEORGE'S HOSPITAL MEDICAL SCHOOL.—The following Entrance Scholarships have been awarded:—In Arts, an Entrance Scholarship of £145 to Mr. Thomas Crisp English, and Entrance Scholarships of £50 to Mr. Henry Ayrton Chaplin, Mr. Lidbrooke Frank Cope, and Mr. Lawrence Jones. In Science, Entrance Scholarships of £85 to Mr. Herbert Stringfellow Pendlebury, B.A., Pembroke College, Cambridge; to Mr. Henry Goodridge Deller, B.A., Trinity College, Cambridge; and to Mr. John Howell Evans, B.A., non-collegiate student of Oxford. The two last named were bracketed, but owing to the excellence of their papers a full scholarship was awarded to each.

KING'S COLLEGE, LONDON.—Entrance scholarships have been awarded at this College to the following gentlemen—viz., to Mr. R. N. Batterbury, a Warneford scholarship of the value of £25 for three years, and to Messrs. J. G. Pritchard and H. G. Wright similar scholarships for two years each. The Clothworkers' Exhibitions have been awarded to Mr. C. F. Mott (£30 for two years) and Messrs. R. H. C. Gompertz and C. L. Cartwright (£20 for two years). The Sambroke Exhibitions have been awarded to Mr. W. L. Stuart (£60) and A. C. Williams (£40).

THE WATER QUESTION AT GODALMING.—The corporation of the borough of Godalming has decided in favour of public as against private water-supply, and intends to purchase the undertaking of the local water company. The value of the works is put at £33,267 and the price asked is £37,500; mortgage debentures, transfer costs, and additional necessary storage works will run the total figure up, it is estimated, to £48,000. It is proposed to borrow this sum, with interest payable during the first five years, and capital and interest by equal instalments during the succeeding fifty-five years, a sixty years' loan in all. The same evening the corporation agreed to apply for a provisional order to light the borough by electricity.

THE DIFFUSION OF SMALL-POX.—The information reaching us concerning the prevalence of small-pox during the first fortnight of the present month shows continued diminution of the disease in the provinces as well as in London. In the metropolis the last three weeks of September had shown cases to the number of 42, 23, and 21 respectively as having been removed to hospitals of the Metropolitan Asylums Board or to the Highgate Small-pox Hospital, wherein the cases remaining under treatment in the same weeks had fallen from 307 to 234; whilst in the opening week of October the new attacks removed numbered only 17, and the patients under isolation had fallen still further to a total of 198. There was one registered death, the deceased belonging to the Wandsworth sanitary area and being an unvaccinated infant under the age of twelve months. Last week the decline continued, only 9 cases occurring, and the hospitals housing on Saturday, Oct. 12th, only 153 patients suffering from small-pox—a total considerably less than half that which obtained at the close of August. There were two registered deaths, occurring in unvaccinated children belonging to as many sanitary areas in East London. Whilst, therefore, we can congratulate ourselves on a falling record of small-pox occurrences in the metropolis, it is well to remember that the period of autumnal recrudescence is upon us, and that action of a preventive character cannot with prudence be relaxed in view simply of a present quiescence of the malady. In the home counties small-pox has apparently disappeared for the present, and in the midland counties attacks are solitary in their occurrence, the few cases cropping up westward being scattered, and the northern districts east of Lancashire having a free bill of health in this respect. There has, however, been a serious outbreak in the Wigan district. At Aspull it has been so widespread that the schools have been closed for an indefinite period, and it is reported that a large number of persons have been removed to the sanatorium. On Tuesday of last week it was ascertained that 14 persons had been removed from Aspull to the institution, and that, including cases from the borough of Wigan, there were over 20 patients in the hospital suffering from small-pox. In the city of Manchester there have been upwards of a score of attacks since the beginning of September, the district of Openshaw being chiefly in question, though cases have also arisen in Newton Heath and Beswick localities of the city. The adjacent borough of Salford, nevertheless, continues free from the disease. In Oldham much more favourable accounts are to hand, for whereas in the fortnight ended Sept. 21st there were 11 new cases, there was not 1 recorded in the succeeding fortnight, 1 death, however, being registered. The last week of September and the initial week of October have not been so fortunate for Dublin in the matter of small-pox as earlier recent weeks, for in the last week of the month there were 2 deaths registered, both in vaccinated adults aged over twenty years; and whilst only 2 new cases were admitted to hospital, leaving 18 under treatment at the close of the month, the next week witnessed 11 fresh admissions, with another death in a vaccinated adult; and the hospital roll showed 27 patients as being under isolation on Oct. 5th.

THE committee of the Bethnal Green Free Library have received from Mr. Charles Welch, F.S.A. (librarian at the Guildhall), and his brother, Mr. S. Welch, M.R.C.S., the gift of the library of their late father, Mr. Charles Welch of Hackney-road, who was for more than forty years the friend of the poor of Bethnal-green and medical officer of the district, and who always took a warm interest in the progress of the institution. In order to provide new shelving and bookcases for this and other gifts to the library and pay for cataloguing about £100 will be required, and the committee will be deeply grateful for any contributions, which should be sent to Mr. G. F. Hilcken at the Library, London-street, E.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—At the quarterly court of the directors held on Oct. 9th, the President, Sir James Paget, being in the chair, two new members were elected. There were no fresh applications for grants. Applications for continued assistance were read from 51 widows, 8 orphans, and 4 orphans on the Copeland Fund, and it was determined that a sum of £1182 10*s.* should be distributed at the next court subject to the report of the visitors. A sum of £452 was voted to be given at Christmas—viz., £8 each to the 51 widows, £3 each to the orphans, and £5 each to the 4 orphans on the Copeland Fund. A grant of £20 towards the self-maintenance of an orphan was made, and a special grant of 10 guineas was given to a widow. The expenses of the quarter amounted to £55 9*s.*

ÆSCULAPIUS LODGE.—The installation meeting was held at the Café Royal, Regent-street, on Wednesday, the 9th inst., when G. Crawford Thomson, M.D., was installed Master for the ensuing year. W. Anthony Nutt was appointed Senior Warden, G. Danford Thomas, M.D., Junior Warden, J. Pickett, M.D., Treasurer, and Thomas Dutton, M.D., Secretary. T. Horrocks Openshaw, M.B., M.S. Dunelm., F.R.C.S. Eng., was elected a joining member. Messrs. William Harrison, M.A. Cantab., and R. T. Hacker Bodilly, L.R.C.P. Lond., M.R.C.S. Eng., were admitted members. A cordial vote of thanks was recorded to Lennox Browne, F.R.C.S. Edin., G. Danford Thomas, M.D., and Thomas Dutton, M.D., for the very able manner in which they had carried out the work of the smoking concert which the lodge and chapter gave to the provincial medical Masons during the meeting of the British Medical Association in London last August. After the transaction of other routine business the lodge was closed and the brethren adjourned to the banqueting room, where they entertained visitors who had honoured the lodge with their company. A most enjoyable social evening was spent.

BEQUESTS TO HOSPITALS.—Mrs. Mary Ash, late of Victoria-square, Bristol, has bequeathed £200 each to the following Bristol medical charities—namely, the Royal Infirmary, the General Hospital, the Children's Hospital, the Medical Mission, and the Clifton Dispensary.—The late Mr. Alfred Lee of Mount Hermon, Woking, has bequeathed £500 free of duty to the Surrey County Hospital.—The managing committee of the Wolverhampton Eye Infirmary has received from the executors of the late Mr. John Parkes £250.—The late Mr. John Hughes of Wynnstay, Sefton Park, Liverpool, has bequeathed £350 to the Liverpool Blue Coat Hospital, £300 to the Liverpool Eye and Ear Infirmary, £200 each to the Liverpool Royal Infirmary and the Royal Southern Hospital, and £100 to the Stanley Hospital.—Miss Frances B. Fetherstonhaugh, late of Up Park, Sussex, has bequeathed £500 to the Chichester Infirmary.—The late Mr. Bernard V. Hall of Liverpool has bequeathed £5000 to the Liverpool Royal Infirmary, £2500 each to the Liverpool Royal Southern Hospital and the Liverpool Royal Northern Hospital, and £1000 to the Ladies' Charity and Lying-in Hospital.—Mr. Henry Nathan, late of Pembroke-gardens, London, has bequeathed £100 to the Jewish Hospital and Orphan Asylum, Lower Norwood, £50 each to the Metropolitan Free Hospital, Gray's Inn-road, the London Hospital, and the German Hospital, Dalston, and £100 each to the Birmingham General Hospital, the Birmingham Children's Hospital, and the Birmingham Queen's Hospital.—The late Mr. William Woolfall of Liverpool and New Brighton has by his will left the following legacies: Liverpool Royal Infirmary, £2000; Northern Hospital, £500; Royal Southern Hospital, £500; Stanley Hospital, £200; Wallasey Cottage Hospital, £100; Wallasey Dispensary, £100; Liverpool Hospital for Consumption, £100; Liverpool Dispensaries, £200; Liverpool Dental Hospital, £100; Liverpool Hospital for Cancer &c., £100; Liverpool Eye and Ear Infirmary, £100; and the Liverpool Infirmary for Children, £100.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Aids to the Analysis of Food and Drugs. By T. H. Pearmain and C. G. Moor, F.C.S.

A Manual of Physiology, with Practical Exercises. By G. N. Stewart, M.D. Edin., D.P.H. Camb. Illustrated. University Series. 1895. pp. 796. Price 15*s.*

An Atlas of Ophthalmoscopy. By Dr. O. Haab. Translated and edited by Ernest Clarke, M.D., B.S. Lond.

The Methods of Microscopical Research. Second Edition. By A. C. Cole, F.R.M.S. 1895. pp. 207.

The Tallerman-Sheffield Patent Localised Hot-air Bath. With Notes. 1895. pp. 51.

BIGGS AND CO., Salisbury-court, Fleet-street, London.

Sewerage and Sewage Disposal of a Small Town. By R. B. Savage, A.M.Inst.C.E. Illustrated. With Index. pp. 78. Price 5*s.* 2*d.*

BLACKIE AND SON, Old Bailey, London, E.C.

A Knight of the White Cross: a Tale of the Seige of Rhodes. By G. A. Henty. Illustrated. 1896. pp. 392. Price 6*s.*

At War with Pontiac; or, the Totem of the Bear: a Tale of Redcoat and Redskin. By Kirk Munroe. Illustrated. 1896. pp. 320. Price 5*s.*

Blackie's Science Text-books: Elementary Physiology. By J. R. A. Davies, B.A. Camb. 1895. pp. 216. Price 2*s.*

For Life and Liberty: a Story of Battle by Land and Sea. By Gordon Stables, M.D., R.N. Illustrated. 1896. pp. 352. Price 5*s.*

"Hallowe'en" Ahoy! or, Lost on the Crozet Islands. By Hugh St. Leger. Illustrated. 1896. pp. 320. Price 4*s.*

The Tiger of Mysore: a Story of the War with Tippoo Saib. By G. A. Henty. Illustrated. 1896. pp. 379. Price 6*s.*

Through Russian Snows: a Story of Napoleon's Retreat from Moscow. By G. A. Henty. Illustrated. 1896. pp. 352. Price 5*s.*

BROWN, H. & W., Fulham-road, London, S.W.

The Art of Horse-shoeing. A Manual for Farriers. By W. Hunting, F.R.C.V.S. Illustrated. 1896. pp. 115. Price 3*s.* 6*d.*

CROSBY LOCKWOOD AND SON, Stationers' Hall-court, Ludgate-hill, London, E.C.

Rural Water-supply. By Allan Greenwell, A.M.I.C.E., and W. T. Curry, A.M.I.C.E., F.G.S. 1896. pp. 210.

DIGBY, LONG, AND CO., Bouverie-street, Fleet-street, London.

Perfect Womanhood: a Story of the Times. By Fred. J. Gant, F.R.C.S. 1895. pp. 237. Price 3*s.* 6*d.*

HEINEMANN, WM., Bedford-street, London.

Movement. By E. J. Marey. Translated by Eric Pritchard, M.A., M.B. Oxon. Illustrated. 1895. pp. 333. Price 7*s.* 6*d.*

LONGMANS, GREEN, AND CO., London.

A Manual of Pathology. By Joseph Coats, M.D. Third Edition. Illustrated. 1895. pp. 1130. Price 31*s.* 6*d.*

Darwin, and after Darwin. An Exposition of the Darwin Theory and a Discussion of Post-Darwin Questions. By the late George J. Romanes, M.A., LL.D., F.R.S. Vol. II. 1895. pp. 344. Price 10*s.* 6*d.*

The Methodical Examination of the Eye. Being Part I. of a Guide to the Practice of Ophthalmology. By Wm. Lang, F.R.C.S. Eng. 1895. pp. 96. Price 3*s.* 6*d.*

LIPPINCOTT, J. B., CO., Philadelphia.

Cutaneous Medicine: a Systematic Treatise on the Diseases of the Skin. By L. A. Duhring, M.D. Part I. Illustrated, 1895. pp. 221.

LIVINGSTONE, E. & S., Edinburgh.

The Urine in Health and in Disease, together with its Chemical Examination. By H. Aubrey Husband, M.B., B.Sc. Illustrated. Third Edition. 1895. pp. 143. Price 1*s.* net.

MACMILLAN AND CO., London.

The Structure of Man; an Index to his Past History. By Dr. R. Wiedersheim. Translated by H. and M. Bernard, the Translation Edited and Annotated by G. B. Howes, F.L.S. Illustrated. 1895. pp. 227. Price 8*s.* net.

PENTLAND, YOUNG J., Edinburgh.

Atlas of the Diseases of the Skin. By H. Radcliffe Crocker, M.D., F.R.C.P. 1895. Fasciculus 12.

SAMPSON LOW, MARSTON, AND CO., Fetter-lane, Fleet-street, London.

Twentieth Century Practice: an International Encyclopædia of Modern Medical Science by leading authorities of Europe and America. Edited by Thos. L. Stedman, M.D. In twenty volumes. Vols. i., ii., and iii. 1895. Prices 21*s.* and 30*s.* each, net.

SMALLMANN, CARL, Basel und Leipzig.

Vorlesungen über chirurgische Infectionskrankheiten. Von Dr. T. Kocher und Dr. E. Tavel. Erster Theil. 1895. pp. 225.

SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, Northumberland-avenue, London, W.C.

Simple Methods for Detecting Food Adulteration. By John A. Bower. Illustrated. 1895. pp. 118. Price 2*s.*

SWAN SONNENSHEIN AND CO., London.

Moral Pathology. By Arthur R. Giles, M.D., B.Sc. 1895. pp. 179.

Stories for Ten-Year-Olds. By Frances W. Saunders. Series I. 1895. pp. 216. Price 2*s.* 6*d.* net.

THE GRAPHOTONE COMPANY, Maclean's-buildings, London, E.C.

Weather and Disease: a Curve History of their Variations in Recent Years. By Alex. B. MacDowall, M.A., F.R.M.S. 1895. pp. 82. Price 2*s.* 6*d.*

THE SCIENTIFIC PRESS, Strand, London.
Diet in Sickness and in Health. By Mrs. Ernest Hart. With an Introduction by Sir Henry Thompson, F.R.C.S., M.B. Lond. 1895. pp. 219. Price 3s. 6d.

UNWIN, T. FISHER, Paternoster-buildings, London, E.C.
Dog Stories. From the *Spectator*. Introduction. By J. St. Loe Strachey. 1895. pp. 264. Price 5s.

WERTHEIMER, LEA, AND CO., Circus-place, London-wall, London.
Penological and Preventive Principles, with Special Reference to Europe and America. By William Tallack, Secretary of the Howard Association, London. Second Edition. 1896. pp. 480. Price 8s.

The Natural History of Plants, Part 16, now completed, with Glossary and Index (Blackie and Son, 50, Old Bailey, London); price 2s. 6d. net.—The Treatment of Diphtheria by Antitoxin; by Wm. H. Welch, M.D. (reprint from the Transactions of the Association of American Physicians, vol. x., 1895).—China: Imperial Maritime Customs: 11, Special Services; No. 2, Medical Reports for the year ended September 30th, 1893, forty-fifth and forty-sixth issues (P. S. King and Son, King-street, Westminster, S.W.).—The Case against Butcher's Meat; by Charles W. Forward; illustrated; pp. 100 (The Insurance Publication Depôt, Dorset-street, London, E.C.); price 1s.—University of London: Accessions to the Library, 1886 to June, 1895 (Eyre and Spottiswoode, London, 1895).—Calendar of the Royal College of Surgeons of England, July 11th, 1895 (Taylor and Francis, Red Lion-court, Fleet-street, London): price 1s.—Observations on Congenital Dislocation of the Hip: by Bernard E. Brodhurst, F.R.C.S.; 1895 (J. & A. Churchill, New Burlington-street, London); price 1s.—The Royal Natural History, vol. iv., Part 24 (F. Warne and Co., Bedford-street, Strand, London); price 1s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BARR, J. F., M.B., M.S. Glasg., has been appointed Assistant House Surgeon to the Glasgow Sick Children's Hospital.

BLANEY, A. J. M., M.B., B.Ch. Irel., has been appointed Physician to the Extern Department of the St. Vincent's Hospital, Dublin.

BRYANT, J. H., M.D. Lond., L.R.C.P., M.R.C.S., has been appointed Lecturer to the Nursing Staff, Guy's Hospital, London, vice Campbell.

CHALMERS, G., M.B., C.M. Edin., has been appointed Medical Officer to the York Board of Guardians.

CHARLES, R. P., has been appointed Analyst for the borough of Neath, vice Morgan.

COTTON, CHARLES, F.R.C.P. Edin., has been appointed Physician to the Seaman's Infirmary and General Hospital, Ramsgate, vice Dr. Leeds, resigned.

CRAIG, J. A., M.B., B.Ch., R.U.I., has been appointed Second House Surgeon to the Royal Southern Hospital, Liverpool.

DALGARNO, J. J. Y., M.B., C.M. Aberd., has been appointed Assistant Anæsthetist to the Aberdeen Royal Infirmary.

DEACON, J. G., M.D., M.Ch., D.P.H., L.A.H., has been appointed Medical Officer to No. 4 District of the Croydon Union, vice the late Dr. Case.

DEAN, GEO., M.B., C.M. Aberd., has been appointed to an Assistantship of Pathology in the Aberdeen University.

ENGLISH, S., M.B., C.M. Glasg., has been appointed Dispensary Surgeon to the Glasgow Sick Children's Hospital.

FINDLAY, WM., M.B., C.M. Aberd., has been appointed to an Assistantship of Practice of Medicine in the Aberdeen University.

FLETCHER, J. L., M.R., C.M. Edin., has been appointed Medical Officer of Health for the South Darley Urban Sanitary District, vice Cantrell, resigned.

GARROD, THOMAS A., M.D. Edin., has been appointed Physician to the Newport and County Infirmary, vice Davies, deceased.

GILBERT, JOHN, L.R.C.S., L.M. Irel., has been appointed Medical Officer for the Crusheen Dispensary District.

GORDON, JOHN, M.D., C.M. Aberd., has been appointed to an Assistantship of Materia Medica in the Aberdeen University.

HUNTER, W. K., M.B., M.S. Glasg., has been appointed an Honorary Physician to the Glasgow Sick Children's Hospital.

LOW, ALEX., M.B., C.M. Aberd., has been appointed to an Assistantship of Anatomy in the Aberdeen University.

MCKERRON, R. G., M.B., M.S. Aberd., has been appointed to an Assistantship of Midwifery in the Aberdeen University.

MCLAREN, ALICE J., M.D. Lond., B.S., has been appointed an Honorary Physician to the Glasgow Sick Children's Hospital.

MILNE, J. B., M.B., C.M. Aberd., has been appointed Honorary Medical Officer to the Sheffield Children's Hospital, vice Cleaver, deceased.

PARHAM, WM. M., M.D., C.M. Edin., has been appointed Medical Officer for the Workhouse, Brecknock Union, vice Williams, resigned.

POLLARD, CHAS., M.D. Brux., F.R.C.S. Eng., L.R.C.P., has been appointed Medical Officer and Public Vaccinator for the Halt Sanitary District of the Martley Union.

RENTON, W., L.R.C.P. Edin., L.R.C.S. Edin., L.M., L.S.A. Lond., has been appointed Clinical Assistant to the South London Royal Ophthalmic Hospital.

RIGG, S. R., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Royal United Hospital, Bath, vice W. A. Sharpin.

SAYERS, M. H., has been appointed Resident House Surgeon to the Royal Orthopædic Hospital.

SENIOR, A., M.B., B.C. Camb., has been appointed Medical Officer of Health by the Esher Urban District Council.

SUTHERLAND, L. R., M.B., M.S. Glasg., has been appointed Pathologist to the Glasgow Sick Children's Hospital.

SWALES, C. P. N., L.S.A., has been appointed Medical Officer for the Colwick Sanitary District of the Stafford Union, vice Tylecote.

TAYLOR, H. S., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Clayton Hospital, Wakefield.

THOMAS, J. T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Borough of Lowestoft.

THOMPSON, G. R., has been appointed Analyst for the county of Monmouth, vice Morgan.

THOMPSON, J. R., M.B., B.Ch., R.U.I., has been appointed Third House Surgeon to the Royal Southern Hospital, Liverpool.

TIPPETT, SYDNEY G., M.R.C.S., L.R.C.P., has been appointed Senior House Surgeon to the Westminster Hospital.

WALKER, W. W., B.A., M.B., B.C. Cantab., has been appointed Assistant Physician to the Peterborough Dispensary and Infirmary.

WEBB, A. L., M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon to the Clayton Hospital, Wakefield.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, 77, Gloucester-street, S.W.—Surgeon to out-patients.

BIRMINGHAM AND MIDLAND FREE HOSPITAL FOR SICK CHILDREN.—Resident Medical Officer and Resident Surgical Officer. Salaries £70 and £50 respectively, with board, washing, and attendance at the institution.

CARLISLE DISPENSARY.—House Surgeon. Salary £130 per annum, with apartments (not board). Applications to the Hon. Sec., 14, Bank-street, Carlisle.

GUEST HOSPITAL, Dudley.—Resident Assistant House Surgeon for six months. Board, lodging, and washing in the hospital provided.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—House Physician, for six months. Salary £20, with board and residence in the Hospital. Also, House Surgeon, for six months. Salary £20, with board and residence in the Hospital.

HULL BOROUGH ASYLUM.—Assistant Medical Officer, unmarried. Salary 100 guineas per annum, with board (no liquors), lodging, and washing. Applications to the Town Clerk, Town Hall, Hull.

HULL AND SCULCOATES DISPENSARY, Parliament-street, Hull.—House Surgeon. Salary £200 per annum, with house (unfurnished), coals, and gas.

LONDON HOSPITAL, Whitechapel, E.—Medical Electrician.

NORTH-WEST LONDON HOSPITAL, Kentish Town-road.—Resident Medical Officer and Assistant Resident Medical Officer for six months. Salary at the rate of £50 per annum for the senior post.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, London.—Examiner in Public Health.

ST. PANCRAS AND NORTHERN DISPENSARY, 126, Euston-road.—Honorary Surgeon.

STOURBRIDGE DISPENSARY.—House Surgeon and Secretary. Salary £120 a year, increasing £5 a year to £130, with furnished rooms, coal and gas, and an extra allowance of £25 for travelling expenses. Applications to the Hon. Sec., The Firs, Norton, Stourbridge.

STOCKTON AND THORNABY HOSPITAL, Stockton-on-Tees.—House Surgeon (non-resident). Salary £200 per annum.

Births, Marriages and Deaths.

BIRTHS.

DAVIES.—On Sept. 24th, at Landour, North-West Provinces, India, the wife of Surgeon-Major A. M. Davies, Army Medical Staff, of a son.

HUDSON.—On Friday, Oct. 11th, at 16, Harley-street, Cavendish-square, W., the wife of C. E. Leopold B. Hudson, F.R.C.S., of a son.

MATHESON.—At Duntulm, North Berwick, on Oct. 10th, the wife of Angus Matheson, M.D., of a son.

ORD.—On Oct. 16th, at 2, Queen-street, Mayfair, the wife of William Wallis Ord, M.D., of a daughter.

MARRIAGES.

COX—WARNER.—On Sept. 3rd, at the Roman Catholic Church, Saharanpur, India, John Hugh Cox, I.C.S., fourth son of the late Surgeon-General Charles Lindsay Cox., F.R.C.S.L., to Augusta Edith, elder daughter of the late Edward John Rudyerd Warner, Barrister-at-Law and Government Advocate of the North-west Provinces, India.

SMYTH—STANLEY.—On Sept. 3rd, at the Cathedral, Shanghai, Richard Smyth, M.B., Trinity College, Dublin, C.M.S. Hospital, Ningpo, to Gertrude, eldest daughter of Charles Stanley, Lancaster-gate, W.

DEATHS.

CRAWFORD.—On Oct. 12th, at his residence, St. John's-park, Blackheath, London, S.E., Sir Thomas Crawford, K.C.B., M.D. Edin., Director-General, Army Medical Department (retired) aged 71.

EVANS.—On Oct. 10th, Evan William Evans, M.R.C.S., of Tadley, Hants, aged 43.

KEITH.—On Oct. 9th, at Charles-street, Berkeley-square, W., Thomas Keith, M.D. Edin., LL.D., F.R.C.S. Ed., aged 68.

MESSER.—On Oct. 9th, at Belgrave-place, Edinburgh, John Cockburn Messer, M.D. Edin., F.R.C.S.E., Deputy Inspector-General of Hospitals and Fleets, R.N., retired.

SHELTON.—On Oct. 12th, at Bolton-street, Piccadilly, Surgeon-General G. A. F. Shelton, aged 74.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Dr. Frederic Hewitt and Mr. A. Marmaduke Sheild: On Posture in its relation to Surgical Operations under Anæsthetics.

WEDNESDAY.—HUNTERIAN SOCIETY.—8.30 P.M. Dr. G. Sims Woodhead: The Probable Limitations of Serum Therapy.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—Introductory Address by the President. Papers:—Dr. Radcliffe Crocker: Impetigo Contagiosa Gyrata.—Mr. R. W. Parker: Sequel to a case of Removal of the Right Patella for Primary Sarcoma; Recurrence after Six Years in the Iliac Glands; Death.—Dr. A. Wilson: The Treatment of Acute Pleural Effusion by Incision.—Mr. C. Mansell Moullin: Suprapubic Cystotomy and Prostatectomy in cases of Multiple Calculi.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY.—LONDON POST-GRADUATE COURSE.—London Throat Hospital, Great Portland-street, W., 8 P.M., Mr. G. Stoker: Chronic Glandular Disease of the Naso-pharynx.

TUESDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Delusional Insanity. Paranoia.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

HOSPITAL FOR CONSUMPTION &C., BROMPTON.—Dr. T. H. Green: Pleural Effusion.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—5 P.M. Dr. Morgan Dockrell: Pityriasis Rubra Pilaris.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Mr. Keetley: Surgical Cases.

THURSDAY.—LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Gt. Ormond-st., 3.30 P.M., Mr. C. A. Ballance: Selected Surgical Cases—National Hospital for the Paralysed, Bloomsbury, 2 P.M., Dr. Buzzard: Cases in the Hospital.—Central London Sick Asylum, Cleveland-st., 5.30 P.M., Mr. A. Pearce Gould: Cases in the Wards.

FRIDAY.—LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M. Prof. Crookshank: Anthrax and Malignant Œdema.

SATURDAY.—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 11 A.M., Dr. Craig: Stupor, Catalepsy, Katatonia, Dementia.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—Dr. Morgan Dockrell: Diseases of Sweat Glands.

During the week marked copies of the following newspapers have been received:—*Oban Express, Huddersfield Examiner, Wolverhampton Chronicle, Newcastle Leader, Northern Echo, Herts Reporter, Chorley Guardian, Hampshire Independent, Barnsley Chronicle, Craven Herald, Leicester Post, Manchester Guardian, Sheffield Telegraph, Truth, Dorset City Chronicle, Brighton Gazette, Times of India, Pioneer Mail, Builder, Scotsman, Citizen, Architect, Irish News, Liverpool Daily Post, Sanitary Record, Leeds Mercury, Brighton Examiner, Eastern Morning News, Lymington Chronicle, Yorkshire Post, Birmingham Gazette, Bristol Mercury, West Middlesex Standard, Local Government Chronicle, Reading Mercury, Mining Journal, City Press, Weekly Free Press and Aberdeen Herald, Buchan Observer, Hertfordshire Mercury, Local Government Journal, Surrey Advertiser, Guy's Hospital Gazette, Down Recorder, Irish News, Le Courrier de la Presse, Western Daily Mercury, Musselburgh News, Long Eaton Advertiser, Arbroath Herald, Wisbeach Standard, North Cambridgeshire Echo, Ipswich Journal, Buckingham Express,* &c., &c.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Oct. 17th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp. Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct. 11	30·06	N.W.	47	45	85	57	40	...	Fine
,, 12	30·12	W.	53	50	92	62	47	...	Cloudy
,, 13	30·29	W.	55	52	66	57	50	...	Overcast
,, 14	30·05	W.	52	50	77	60	50	...	Cloudy
,, 15	29·97	S.E.	52	51	80	63	49	...	Foggy
,, 16	30·11	N.E.	51	50	83	54	50	0·20	Cloudy
,, 17	30·47	N.E.	43	41	83	53	40	...	Fine

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

"APPOINTMENT OF HOUSE SURGEON TO THE NORTH CAMBS HOSPITAL, WISBECH."

To the Editors of THE LANCET.

SIRS,—As the letter in THE LANCET of Oct 5th from "J. S. B., D. S., and E. E." may leave your readers under an erroneous impression, I should be obliged if you would allow me to state the facts of the case, with which those gentlemen were not acquainted. For the post of house surgeon there were eighteen candidates, *of whom Dr. Taylor was one.* He and the other seventeen sent in testimonials, all of which, I may say, were of very high character. From the eighteen candidates, after careful consideration, were selected *four, of whom Dr. Taylor was one.* He was acting as locum-tenent for the retiring house surgeon, and was informed verbally. Our honorary secretary, in writing to the other three, by a clerical error which we all regret, mentioned *three* as the number selected. In summoning the members of the committee to the special meeting he mentioned *four.* At this meeting each of these four gentlemen was invited in turn to interview the committee. After these interviews and some discussion the matter was put to the vote. Of the nineteen members of the committee twelve voted for Dr. Taylor, who was accordingly elected.

I am, Sirs, your obedient servant,

Wisbech, Oct. 10th, 1895. ROBERT E. R. WATTS, Chairman.

PERSISTENT HICCOUGH AND SNEEZING: A SUGGESTION WANTED.

To the Editors of THE LANCET.

SIRS,—A patient (female) aged twenty years has now been under treatment for a couple of years for the cure of hiccough and sneezing. Not a single day passes without her suffering from an attack, which very often continues from four to five hours, and leaves her in a very collapsed condition. She is a nervous patient, but not particularly so. Her dietary is a good one, and she takes a fair amount of open-air exercise, and lives in a good social sphere. There is no organic lesion in the throat or nose to give rise to any local irritation. Her powers of digestion are good. All the usual remedies, both local and constitutional, have been tried, but of no avail. Perhaps some of your readers would kindly suggest a means of treatment.

I am, Sirs, yours faithfully,

Glasgow, Oct. 13th, 1895. R. H. ALLEN, M.B., C.M.

"PASSING RICH WITH FORTY POUNDS A YEAR."

WE have had brought to our notice the following advertisement, which has appeared in the *Galloway Advertiser and Wigtownshire Free Press*, and we confess to being deeply puzzled by it.

> "WANTED.—MEDICAL OFFICER (Resident) and Vaccinator for the Parish of Portpatrick. Salary, including medicines, £40 per annum; to attend private patients at the scale of fees fixed by Parish Council, copy of which can be obtained from the clerk. To enter upon duties on 11th November. Canvassing a disqualification.—Applications, with testimonials, to be lodged with the clerk of the Parish Council, Portpatrick, not later than 25th October."

The salary offered to the medical officer and public vaccinator of the parish is not large if it is to be his only source of income, for even the most frugal of Scotchmen would find it difficult to emulate the village preacher of "Sweet Auburn," and be passing rich with £40 a year. Naturally the medical officer will desire to have as large a private practice as he can get, and his official salary has been fixed from that point of view; but the parish council, it will be seen, propose to fix the scale of fees at which he shall attend private patients. This is, indeed, a departure, and one which will, we hope, make it very difficult for the parish council to obtain an officer. For, firstly, no one can fix the fees properly at which another man should attend private patients. This is entirely a matter for mutual arrangement between patient and attendants, and the interference of the parish council must lead to injustice to someone. And, secondly, the position assumed by the parish council towards their officer is intolerable. If they exercise the prerogative indicated in their advertisement they would have him entirely at their mercy; they could make his fees so high that no one at Portpatrick would employ him, or so low that he could not earn a living wage. We are sure that the council have not quite understood the nature of the new duties they propose to take upon themselves.

Hibernicus.—All the information our correspondent seeks can be obtained from the agents of the various lines, most of whose addresses can be found in the London, Liverpool, or Glasgow Directories.

M.D. is thanked for his communication. It is wrong that medical men should be expected to give certificates gratuitously. They should be paid for by those in whose interests they are demanded.

Riparian.—The cost can be made anything. Our correspondent is recommended to write to the four different Inns for information.

RIGOR MORTIS IN THE FŒTUS IN UTERO.

To the Editors of THE LANCET.

SIRS,—Some few years ago I sent an account to a contemporary of a case in which rigor mortis in the fœtus in utero was the cause of difficult labour. During the last two years I have had three other cases, so that an event which I looked upon as rare must not infrequently occur; but it appears to have passed unnoticed by the generality of practitioners, as everyone to whom I have spoken about the matter has confessed that he had never even heard of, much less seen, such a case, and the text-books do not mention it. The following notes of my last case are, I think, worth placing upon record.

On Sept. 6th I was called in to a primipara aged thirty-seven by the midwife in attendance, as, though the os was fully dilated, no advance of the head had taken place for several hours. On applying forceps considerable resistance was experienced, and what I expected to find an easy forceps case proved to be quite the reverse. Progress was slow until I secured extension, when the head came down well; but further difficulty was experienced in extracting the body, which gave the impression of being much too large for the maternal passages. The fœtus, however, proved to be not large, but rather under the average. The difficulty had arisen at the various stages: first, the normal flexion had not taken place, and at a later stage the stiffness of the neck had prevented extension, and the lateral flexion of the body had been interfered with owing to the same cause. Rigor mortis was well developed all over the body, the arms and legs being stiff and in the flexed position. On balancing the child's body on one hand its back kept almost straight and the legs in the same flexed position, the heels not dropping below the nates. Owing to the forcible flexion of the neck the head moved upon the trunk like a hinge joint. At the moment of applying pressure with the forceps there was a crunching noise quite audible, sounding as if one were breaking a bone.

I am, Sirs, yours faithfully,

B. JONES, M.D. Durh., M.R.C.S., &c.

Leigh, Lancashire, Oct. 5th, 1895.

Squills.—The person who has been left a legacy or share of residue in a will should not be an attesting witness to the execution. The attestation would be good, but the legacy would be forfeited. An executor may be a legatee under a will and very generally is. Our correspondent does not explain his position very clearly, and if these are not the only two points upon which he desires advice he had better consult a solicitor.

IMAGINATION AGAIN.

AT a recent inquest in the Shoreditch Coroner's Court a lay reporter made the medical man who had made the post-mortem examination of the body say that he had found death to be due to the deceased's heart having "burst in half," and that the only reasons to be assigned for the catastrophe were "over-excitement and eating too heavy a supper," and the paragraph was headed with a jocularity not quite apt to the occasion, "Death from a Broken Heart." The medical man, to whose attention the extraordinary statement credited to him has been brought, writes us the following account of the case, from which it will be seen that the "bursting in half" was a piece of reportorial exuberance:—

> "I was called on the Monday at 11.5 P.M., and found deceased just as she had fallen, in a crouching position on the floor, with her back against the bed, quite dead, and not resting in a chair as reported. I made a post-mortem examination on Thursday afternoon. I found the body well nourished and containing a fair amount of subcutaneous fat. The abdomen was greatly distended by air. The lungs were both gorged with blood, especially the right one—no doubt the beginning of an attack of congestion of the lungs. On opening the pericardium I found it completely distended with dark blood-clot and serum. The heart itself was soft and flabby, and presented the appearance of fatty degeneration; the valves were quite healthy, but the walls were thinner than normal. This was especially marked in the walls of the auricles, being very thin and soft. At the right side of the right auricle I noticed a patch a little larger than a shilling, and much deeper in colour than the surrounding tissue, presenting the appearance of recent inflammatory changes; at this spot there was an opening, with rugged edges, communicating with the interior of the right auricular chamber, and from which the hæmorrhage took place. The liver was larger than normal, soft, and friable; the kidneys were somewhat congested; the brain was normal, and the spleen also. I gave it as my opinion that the exciting cause of the rupture of the auricle was the hearty meal of eels and potatoes partaken of by the deceased, causing dyspepsia and flatulency, from which she often suffered, producing laboured action of the heart from pressure of an over-distended stomach, thus increasing the blood pressure from the stasis in the lungs, resulting in rupture, syncope, and death. I said nothing about over-excitement and I certainly never spoke of the heart bursting in half."

Mr. William Paul.—We agree with our correspondent that the subject is always deeply interesting; but we consider that the danger is practically non-existent, and that no immediate legal interference is necessary.

Messrs. Arthur and Co., of 69, Berners-street, Oxford-street, write, with reference to our notice last week (p. 921) of "Tannopumiline," that they have altered the name to *Tannopumilio*.

Mr. A. C. Elmore.—The story our correspondent tells us is not a creditable one.

"DROWNING FOLK-LORE."

To the Editors of THE LANCET.

SIRS,—The belief that men and women take a different position when floating after drowning is discussed by Sir Thomas Browne in the sixth chapter of the fourth book on "Vulgar Errors." The belief in his time dated from Pliny, and was that women floated face downwards and men on their backs. He says that Scaliger declines to accept the explanation that nature seeks to conceal thus the shame of the dead, preferring to attribute it to the fact that women take the prone position on account of the weight of the abdomen. "If so," says Sir Thomas Browne, "only men with great bellies will float downward, and only Callipygæ and women largely composed behind upward." If there is any truth in the fact that women float on their backs, it might be explained by the same reason as the floating of witches when put to the test of water—i.e., hysterical paralysis of the abdomen due to fright, and consequent gaseous distension of the intestine, which could not possibly assume the lower level in the water.—I am, Sirs, yours truly,

Oct. 12th, 1895. HISTORICUS.

Medical Jurist.—Our correspondent presents us with an excellent opening for casuistry. It is generally considered that when the cause of death is asked for it is the immediate cause that is meant, so that any cause directly behind that immediate cause should also be mentioned as primary. The primary cause in the example mentioned was the operation and the secondary cause the septicæmia. It is quite true that no operation would have taken place had there not been a pathological condition present, but such a train of reasoning can be reduced to absurdity. Suppose, for instance, the operation had been necessitated by a broken leg and the broken leg had been the result of a train accident—"locomotive attacks ye," as *Punch* has it—what would have been the primary cause of death?—the train, or the man who made it, or the driver, or George Stephenson?

A Constant Reader.—The regular and simple way of notifying a change of address is by sending to actual patients a visiting card with the new address substituted for the old one.

"A FEMALE MEMBER OF THE ARMY MEDICAL STAFF."

To the Editors of THE LANCET.

SIRS,—In the last issue of THE LANCET inquiry was made by a medical gentleman in the United States as to the facts of the services in the Army Medical Department of "James Barry," who, on her sudden death in Craven-street, Strand, was discovered at the inquest to be a woman.

In 1857 I travelled with this remarkable character on board the intercolonial steamer plying between St. Thomas and Barbadoes, when I occupied the same cabin, I in the top and she in the lower berth—of course, without any suspicion of her sex on my part. I well remember how, in harsh and peevish voice, she ordered me out of the cabin—blow high, blow low—while she dressed in the morning. "Now then, youngster, clear out of my cabin while I dress," she would say. A goat was on board to provide her with milk; she was a strict vegetarian, and she was accompanied by a negro servant and a little dog called "Psyche." The doctor was going at the time to visit her old friend and enemy, General Sir Josiah Cleote (commanding troops), with whom, when aide-de-camp to the Governor of the Cape, she had fought a duel and was wounded in the leg. The late Colonel Shadwell Clerke, who was at that period on the General's Staff, told me before his death last year that he, too, was challenged for some fancied insult, but that General Cleote pooh-poohed the idea and made them shake hands.

In person "James Barry" was short in stature, angular in figure, with a long Ciceronian nose, prominent cheek-bones, and a rather lugubrious expression of countenance. I possess a photograph of her, and there is another, kept under lock and key, in the medical officers' mess at the Royal Victoria Hospital here. Neither is a good likeness. Details of her life were given shortly after her death in the May number of *All the Year Round*, entitled "A Mystery Still," and from these particulars, as well as from such information as I subsequently gleaned, I formulated the heroine of my novel (in three volumes), "A Modern Sphinx," published in 1881, a reproduction of which in single volume, re-named and edited by Miss Braddon, "Madeline's Mystery," may still, I fancy, be obtained. "A Modern Sphinx" is out of print; but as I retain a few copies I shall have pleasure in placing a copy at your disposal for transmission, if you like, to your American correspondent. Few men knew more about Barry's career than the recently deceased Surgeon-General Sir T. Longmore, C.B., with whom I often corresponded on the subject, and who placed a copy of my novel in the Museum Library of the Victoria Hospital. But many other persons are, I believe, still to the fore who could furnish interesting reminiscences of this eccentric individual—notably, General Lowry, C.B., General W. Chamberlayne, General de Montmorenci, Colonel R. Wilson, and Surgeon-Major-Generals Tippetts and G. Langford Hine; all of them served from time to time with her at various foreign stations. I may add that she always seemed to have immense influence at headquarters and could almost choose her own station. Imperious in manner and officially dictatorial, in social circles she was admired and respected; she was, moreover, sympathetic and skilful in her profession—yet what a life of repressed emotions must hers have been?—a woman, too, who it was said gave birth to a child in her early days.

I am, Sirs, yours faithfully,

E. ROGERS, Lieutenant-Colonel,
(late Staff Officer of Pensioners and formerly Captain 3rd West India Regiment).

Netley, Oct. 15th, 1895.

To the Editors of THE LANCET.

SIRS,—At page 959 of THE LANCET you say: "Probably some of our readers can inform us and our correspondent with certainty about James Barry." I write to say that the medical officer so called travelled in a steamer of which I was the medical officer many years ago. In common with all on board, I was much struck with the peculiarities of that officer; and, I think, a notice of those has since appeared in one of the journals. The diet and the fondness for pets, the peculiar figure and appearance, all justified the ideas that were entertained about her at the time; and these ideas, it is said, were confirmed after her decease. It has been stated that this officer fought two duels; so it is evident that want of courage was not one of her weaknesses.

I am, Sirs, your obedient servant,

C. F. MOORE, M.D., F.R.C.S. Irel.

Upper Merrion-street, Dublin, Oct. 14th, 1895.

To the Editors of THE LANCET.

SIRS,—I see that you ask from your readers any particulars which may be known to them about Dr. James Barry. I heard of him (or her) from my old friend, Dr. Jobson, who, after spending many years as an army surgeon, finished his career as a physician in Kent. Dr. Jobson died about fifteen years ago, an old man aged about eighty-five years, so it must have been rather early in the century when he was at college in Edinburgh. One of his fellow students was remarkable by the persistency with which he avoided his fellow students, and was also laughed at because, in contradistinction to the shooting-coats which all the other students wore, he invariably appeared in a long surtout. However, although Barry kept the other students at a distance, he soon became friendly with Dr. Jobson and invited him to his lodgings, where he introduced him to his mother, with whom he lived. Both Dr. Jobson and Dr. Barry resolved to go into the army, and were together at a depôt where Dr. Jobson was astonished to find that Dr. Barry was afraid to go home by himself through a rather rough part of the town, but asked Dr. Jobson to go with him. Dr. Jobson, who, although a little man, was devoted to athletics, was much disappointed that he could not teach Dr. Barry to box. He never would strike out, but kept his arms over his chest to protect it from blows. Dr. Jobson and Dr. Barry were appointed to different regiments, and they never met again, although Dr. Jobson heard of him occasionally as performing all the duties of an army surgeon, and also of his performing serious operations in the hospital at Malta. When she died and it was discovered that she was a woman and had been a mother, Dr. Jobson was as much astonished as anybody; for, although he remembered the above-mentioned womanly traits, they had never caused him to have the slightest suspicion of her sex. What romance or tragedy led Dr. Barry to act as she did will not, I fancy, be ever known—at least, Dr. Jobson could never get any light upon it. As I myself am an old woman over sixty years of age I dare say there are not many people left who know anything about Dr. Barry, and I have thought these scanty particulars might interest your readers.

I am, Sirs, yours obediently,

India-street, Edinburgh, Oct. 14th, 1895. JANET CARPHIN.

To the Editors of THE LANCET.

SIRS,—There is no doubt of the existence of "James Barry," or of her sex. She lived some forty years ago in a street leading off Piccadilly—Down-street, I think. I lived in the same neighbourhood at that time, and knew her perfectly well by sight, and it was a matter of common repute that she belonged to a different sex than the one indicated by her clothes. Dr. Barry, as she was always called, was about 5 ft. 6 in. in height, slight in build, with a smooth, pale face. I saw her last in the year 1851 or 1852, and while in India later I remember reading of her death and of the discovery of the sex. She was a great friend of Lady Charles Somerset, who used to live near by in Piccadilly at that time. This information is not very definite, but it will help to assure Dr. Bright that "James Barry" is no figment, and that the story of her sex is undoubted.

I am, Sirs, yours faithfully,

Oct. 16th, 1895. A.M.S.

To the Editors of THE LANCET.

SIRS,—Referring to Dr. Bright's queries under the above heading in THE LANCET of Oct. 12th, I beg to refer him to Dr. Meiring Beck of Rondebosch, Cape Town. Dr. Beck discovered reliable information concerning "Dr. James Barry," and read a most interesting paper on the subject to the Cape Town Branch of the British Medical Association, which was published in the *South African Medical Journal* about six months ago. It appears that "Dr. James Barry" served a useful career in the Army Medical Staff in Cape Colony, the West Indies, and, I think, also St. Helena. Her sex was not known until after death.

I am, Sirs, yours faithfully,

H. LAING GORDON, M.D. Edin.

Vincent-square, S.W., Oct. 14th, 1895.

Mr. J. C. Glenville.—We do not prescribe, and we do not recommend individual practitioners. We so far depart from our rule as to inform our correspondent that the method of treatment he desires is absolutely mythical, and we recommend him strongly to see a neighbouring surgeon.

Z.—We will inquire what M. Chauveau really said, and if we can learn definitely will communicate further through our columns. The newspaper cutting is, of course, absurd.

Kappa can only be advised to consult his medical attendant.

"THE PRESYSTOLIC APEX MURMUR WITHOUT MITRAL STENOSIS."

To the Editors of THE LANCET.

SIRS,—Dr. Arthur G. Phear's interesting article on the above subject, which appears in THE LANCET of Sept. 21st, makes me think it worth while to record the following case, which seems to indicate that a mere variation in the cardiac rhythm may give rise to a diastolic apex murmur.

A woman aged seventy years had constipation, nausea, and vomiting, with acute pain in the region of the vermiform appendix. The temperature was 99·5° F. and the pulse 100 per minute. The patient had previously had an attack of appendicitis. The bowels were opened with an enema. The vomiting ceased and the temperature became subnormal. There was a low-pitched, long, harsh diastolic apex murmur. There were no signs of cardiac hypertrophy and no other murmur. With ten-minim doses of tincture of digitalis every six hours the murmur completely disappeared in four days, and the pulse-rate was reduced to 83. The explanation offered is as follows. Normally the size of the ventricular cavity increases slowly during diastole and is kept quietly filled with blood. No diastolic murmur is then audible. But when the diastole is quickened the ventricular cavity increases too rapidly to be kept quietly filled. The flaps of the valve and the ventricular walls are deprived of their blood support, and the auriculo-ventricular stream is hastened by increased ventricular aspiration. Rapid diastole produces a hastened blood stream, flowing from one to another cavity upon unsupported muscular and tendinous structures that can be readily thrown into vibration. A diastolic murmur then becomes audible. It seems to me that in this case it was by slowing diastole that digitalis, combined, it may be, with the cessation of abdominal pain, caused the murmur to disappear.

I am, Sirs, very truly yours,

Fazeley, Tamworth, Oct. 14th, 1895. WILLIAM CATTO.

Communications, Letters &c. have been received from—

A.—Dr. J. Anderson, C.I.E., Lond.; Mr. Adamson, Accrington; Apollinaris Co., Lond., Secretary of; *Australian Trading World, The*, Lond., Editor of; A., Liverpool; Æsculapius, Lond.; A.C.E., Lond.

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Y.—Yorkshire College, Leeds, Secretary of.

Z.—Messrs. A. and M. Zimmerman

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THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

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